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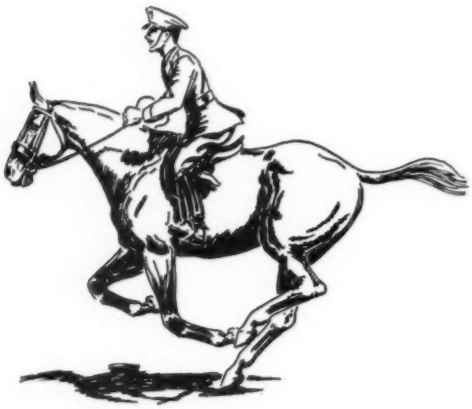

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The WEDGE and

German Tactics Against the Russians

THE outstanding characteristic of the German operations in the Campaign in the West during 1940 was the decisive rôle of the armored forces. At Sedan in May and again along the Aisne in June, Panzer divisions were hurled through the gaps that had been created by the combined action of the other arms. These armored forces, with the foot divisions following as rapidly as possible, pressed on relentlessly without regard to the safety of their own lines of communication until they either reached the English Channel or the Swiss border. The ruthless impetuosity of these daring tactics seemed to unnerve the French Army and caused its rapid collapse. The Maginot Line proved to be a collosal death trap!

Successful as these tactics proved against the French, they do not appear so far to have been employed by the Germans in the Russian campaign. This is due in part to the vastness of the theater of operations but mainly to the number and quality of the Soviet troops in both training and equipment, which makes them stubborn and dangerous opponents. As a result, the Germans have found it impossible to take liberties with these adversaries whose unique morale causes each unit and each individual to fight to the death.

As a rule the German armored forces in Russia have advanced cautiously in a wedge-like formation, closely supported by the foot infantry divisions. In addition, the Air Force has rendered close support to the ground troops, seldom operating more than 200 miles behind the hostile front. This is shown diagramatically in Figure 1.

In this wedge formation, Russian forces that advance between or are by-passed by the armored divisions are dealt with by the advancing German infantry divisions.

The tactical result of the operations of these German armored wedges, closely supported by the infantry and aviation, has been the continuous breaking off and surrounding of portions of the Russian forces. This encirclement of hostile forces is called by the Germans a *Kessel*. This is derived from a German hunting term *kesseljagen*, in which the game, having been encircled, is driven in from all sides toward the center for the kill.

In case the *kessel* is very large it is broken up into smaller areas by the armored forces.

Thus the two great concepts of the *wedge* and *kessel* stand out as characteristic of the German operations in the East. The strategical plan of the two tremendous encirclement battles of Smolensk and Kiev were based on the successful carrying out of these two tactical operations.

Field Marshal Gerd von Runsted, who is credited with the great "kessel" of Kiev.

BATTLE OF SMOLENSK

An official report of the German High Command describes the battle of Smolensk as follows:

"During the breakthrough to the east and northeast of Smolensk by Panzer and motorized infantry divisions, the foot infantry divisions in spite of the heaviest counterattacks covered the flanks of the armored shock wedge, which was attacked time and again by the enemy, and carried out the encirclement of the enemy forces that had been broken through by the armored units. As a result, a mighty battle occurred in the gen-

KESSEL

eral area: Polotsk, Vitebsk, Smolensk and Mogilev—an area 250 km. wide and 150 km. deep. In almost four weeks of fighting the Soviet forces sought to regain their freedom, fighting with the courage of desperation and suffering enormous losses, while new troops were thrown into the battle to relieve them. All these attempts failed due to the flexibility and tenacity of the German troops."

The form of the battle of Smolensk is typical of all the operations in the East and is indicative of the predominant part played by the two great concepts *wedge* and *kessel*. From the first day of fighting and continuing throughout the operations Panzer wedges were a prominent feature, thrusting themselves deep into the enemy front and making a breach. These shock wedges executed their breakthrough operations with extraordinary boldness, often with flanks uncovered and the enemy on the right, on the left, in front and to the rear, where the Russians would again assemble after the passing of the wedge.

These wedges were a necessary preliminary for the *kessel* operations in that they formed the wall separating the parts of the Soviet front and divided the Reds into groups.

These wedges of armored and motorized troops were widened and covered by the infantry divisions so that the German infantry had to make almost incredible marches in order to keep up with the Panzer formations and be able to cover the flanks of the shock wedge and carry out the encirclement and destruction of the Russian groups that were cut off. Germany then, was deficient in horse cavalry.

So in this great battle of Smolensk there were many combat centers; the manifold nature of the separate operations was confusing even to the German troops who were not acquainted with the operation as a whole. The vast battlefield was broken up into numerous strong points of resistance and encircled areas of greater or less size in which the Russians were destroyed. These encirclement operations were carried out as a rule in the following manner: After splitting off an enemy group the shock wedge would then swing to the right or to the left and by quick turns cut out a sector from the enemy front, then with extraordinary rapidity, before the enemy realized it, the encirclement would be completed.

So at times there were situations when the location of the front was known only to the German High Command, while the individual soldier had the impression that the front was everywhere—in front, behind and to the right and to the left.

Due to the tenacity of the Russian defense and the way their troops preferred to fight and die rather than to surrender, every encircled area became a bloody battlefield. If it is remembered that the Russians are very skilled in the construction of field works, that they are masters of camouflage and know how to exploit to the full the possibilities of every terrain feature, then it can be understood that the desperate masses in the encircled areas utilized the areas for defense in a manner that was most effective. Every village, every house, every wall, every strong point was utilized, and natural obstacles were also used in the defense and their organization completed by barriers. So then every *kessel* was a fortified area in which there were not only considerable masses of men for defense but also large quantities of arms and matériel.

The German troops, having completed an encirclement operation, often had to use considerable forces in cleaning up the fortified area. In these *kessels*, the Russians were like game driven together trying to break out in all possible directions. At one encircled area, where the Soviets made a particularly desperate attempt to break out, the Germans claimed that only three hundred Russians were captured while two thousand were killed. This gives an idea of the fierce resistance offered by the trapped masses. If it is kept in mind that in the great encirclement battles of Smolensk or Kiev the fighting was raging simultaneously in many of such encircled areas, then one can realize the effectiveness and the destructive power of such operations when both sides use enormous masses of men and matériel. The narrowing of the encircled area is the final stage in the

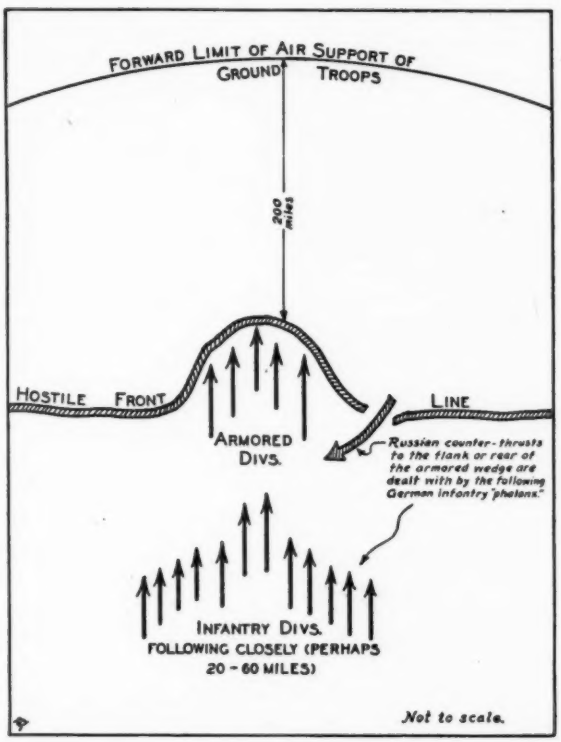

FORWARD LIMIT OF AIR SUPPORT OF GROUND TROOPS
200 miles
HOSTILE FRONT
LINE
ARMORED DIVS.
Russian counter-thrusts to the flank or rear of the armored wedge are dealt with by the following German infantry "phalanx."
INFANTRY DIVS. FOLLOWING CLOSELY (PERHAPS 20 - 60 MILES)
Not to scale.

Figure 1

strategy of encirclement and destruction, which was executed with such extraordinary success by the German command in the East, and which aims not only to defeat and drive back the giant masses of the Soviet armies, but to surround and destroy them.

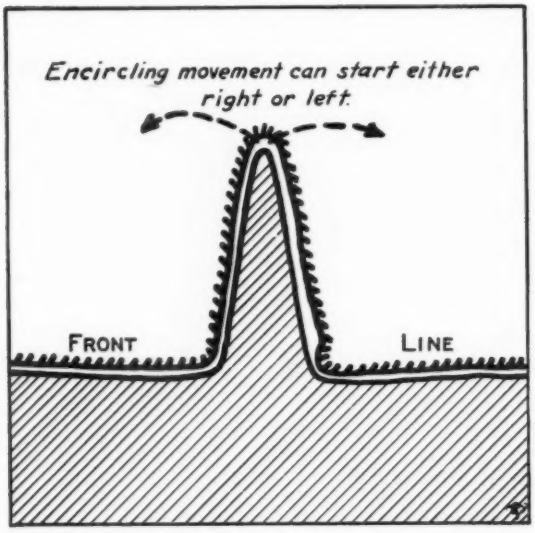


Figure 2 (1)—The wedge is the start of the kessel.

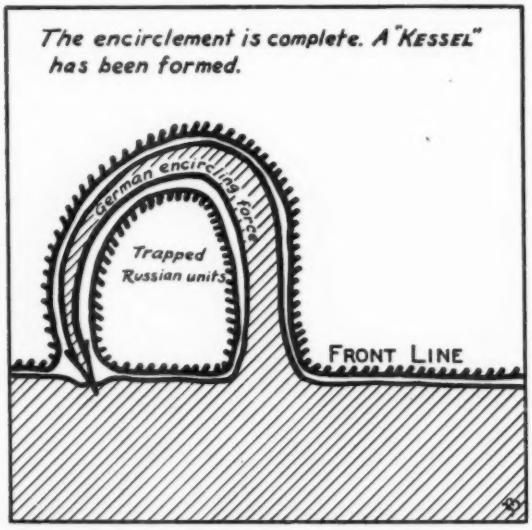


Figure 2 (2)—According to standard military doctrine, a breakthrough should be exploited by strong following forces who plunge headlong toward the hostile general reserves or toward areas of vital strategic importance. Also there may be a general fanning out in the open country in rear of the front. This could not be done in Russia. The so-called "open country" was full of Red units bent on counterattack. Hence we see the Germans adopting a new style of warfare in which the breakthrough force doubles back on itself. In so doing it completes an encirclement of a local portion of the enemy; repeated time and again this process destroys the enemy more or less in place, without the necessity of strategically deep and risky advances.

It goes without saying that the employment of this system of *wedge* and *kessel* operations demands troop leadership of the highest quality and one that can act with lightning like rapidity. In addition, the training and battle power of the troops involved must be developed to the highest degree. Subordinate commanders are often "on their own" for days at a time. Even when they are completely surrounded by superior forces (as happened frequently to units comprising the German wedges), the individual commanders must retain full faith that the eventual working out of the general plan will liberate them. Radio control has been exploited to a high degree.

(Concluded on page 9)

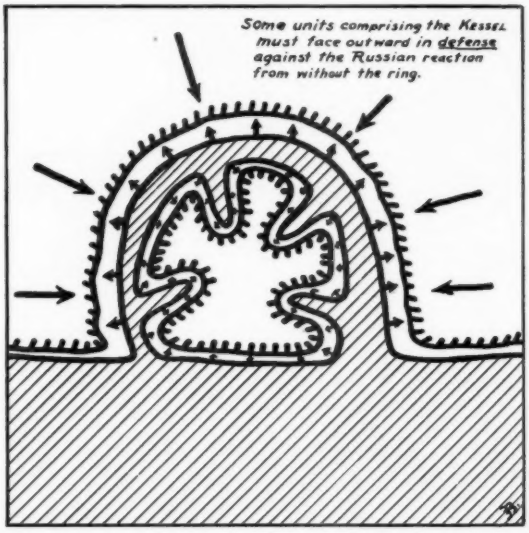


Figure 2 (3)—Sub-wedging the kessel. The German forces facing inward act offensively while at their backs are others acting defensively.

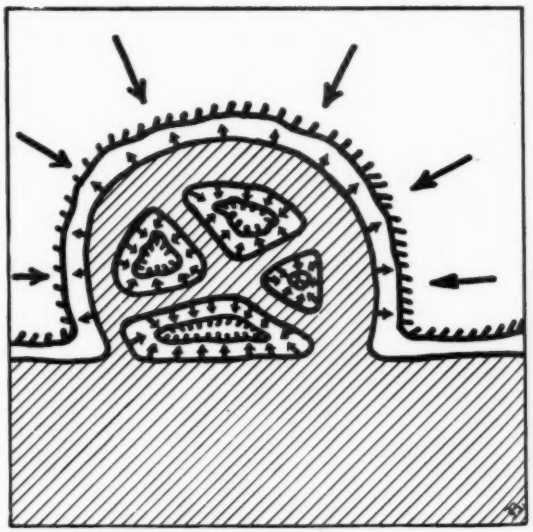
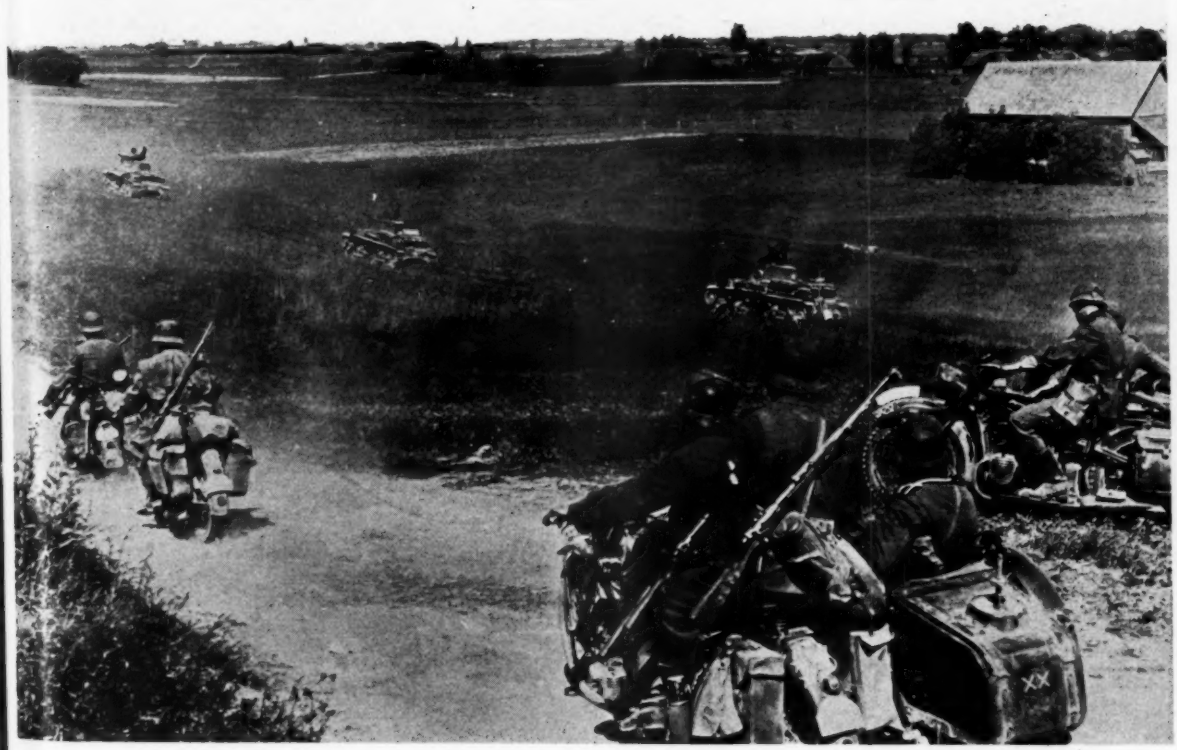


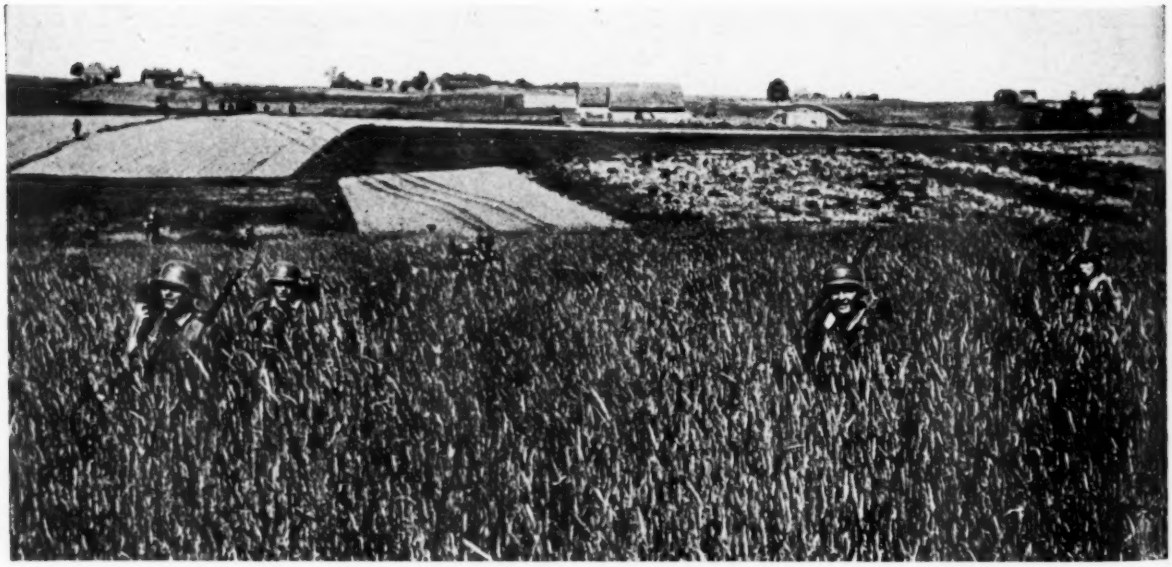
Figure 2 (4)—The Kill. Sub-kessels and final driving-in operations. The U. S. press seems to have failed to grasp the significance of "kessel." It has been miscalled "kettle."

A tank trap constructed at a cost of immense labor by thousands of Russian peasants has been dug hastily across the vast steppes to stop the German Panzers. What happened? The German motorized infantry and horse elements came up under cover of darkness, took refuge in the ditch, tore down ramps for the tanks to use; meanwhile reducing isolated redoubts by their usual storm-troop methods.



The beginning of the wedge. The vanguard of the armored spearhead has passed the Russian tank traps and now moves swiftly and in open order through the flat Russian countryside.

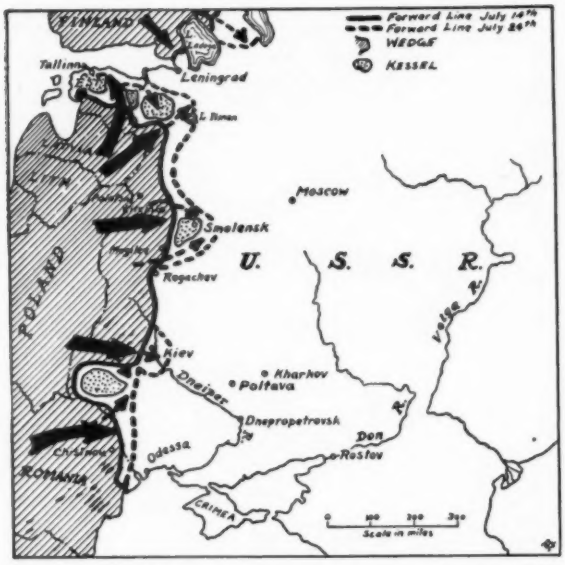
The encirclement begins. Motorized columns pour into the wedge. Resistance has been met, but the advance continues relentlessly. The formation of a kessel, and its maintenance under hostile reaction from within and without the ring, is a hazardous operation. As a single example of the tactical and technical problems involved, consider the artillery. In which direction should each unit face? How is one to avoid shooting across the kessel into one's own troops?



The heavy infantry phalanx comes up to support the armored spearhead. Here we see a modern battlefield in which the German infantry is advancing in typical deployed formation through the Russian grain fields of the Ukraine. The tracks of two tanks may be seen crossing the field. The successful use of wedge and kessel tactics implies the availability of masses of foot infantry who can make daily marches of 25-35 miles per day, for days on end.

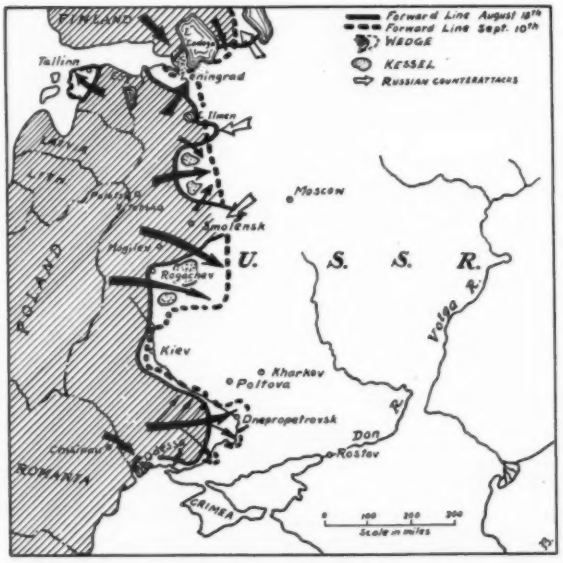
German horse cavalry crosses Berezina River (west of Smolensk, Russia). In the wedge and kessel operations horse cavalry fills in the gaps, maneuvering in terrain too difficult for the motorized and mechanized elements.

The final act in the kessel. Here is part of the bag in Russian prisoners taken in one of the encircling operations near Uman.

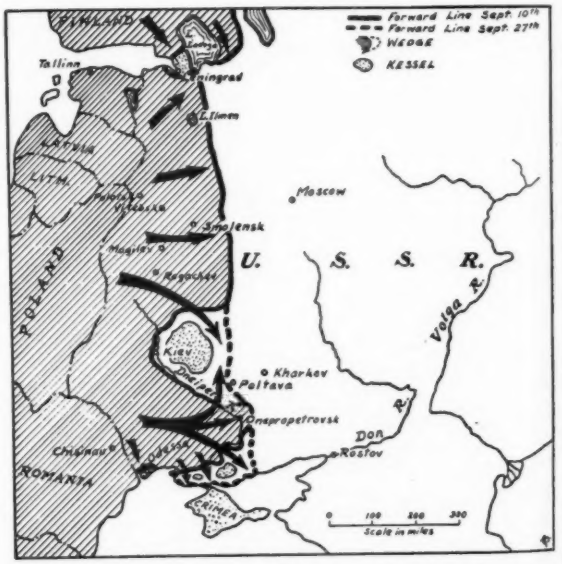


Sketch 1—Here, on a grand scale, are three major Kessels being formed. In the north the Soviet forces in the Balkan States are being pinched off. In the center is the annihilation battle near Smolensk, and in the south, great groups of Reds are being surrounded in the western Ukraine. Within the scope of these major operations are many smaller wedge and kessels, not shown hereon.

Sketch 2—The encirclement of Leningrad is beginning to show form in the north. In the center is another German wedge directed toward Moscow, which on this first attempt met effective resistance. In the south, Odessa is encircled, and Kiev passed temporarily (here the Germans were at one stage thrown back by a Russian counter-drive).

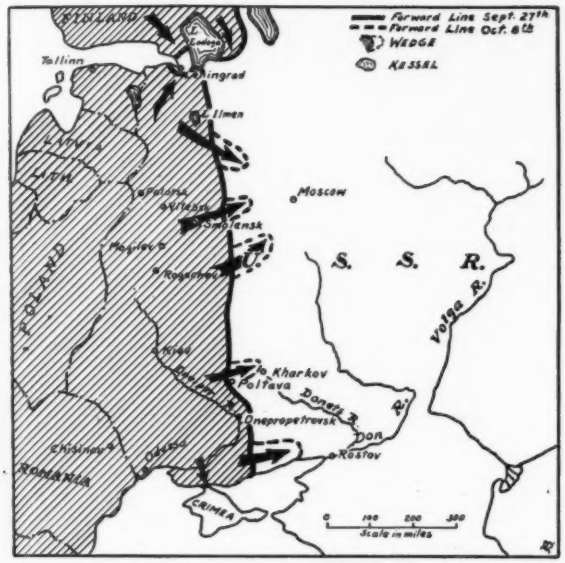


Sketch 3—A strategic operation which is to result in the fall of Kiev and the Crimea is developing here.



Sketch 4—The vast kessel of Kiev and Crimea is completed, with its huge booty in prisoners and matériel.

The photographs on preceding pages show how the wedge and kessel method was applied in the war in Russia. Sketches 1-5 show graphically how these encirclement operations were conducted in the great battles of Smolensk and Kiev. Illustrated also are the beginnings of the drives in the direction of Moscow and the Donets basin, where the Italian and Russian cavalry clashed.



Sketch 5—With scarcely a pause, the Germans continue driving wedges toward the Donets basin and Moscow. Leningrad has not fallen, but is completely cut off, as is Crimea. The gigantic Russian military machine is being slowly "wedged and kesseled" in major and minor battles of annihilation.

(Continued from page 4)

This Wedge and Kessel is thus an interesting *variation*—not an abandonment—of the blitz, and shows that the Germans must be expected to employ a "change of pace" in conformity with each new theater of operations and new opponent. This should be remembered!

RUSSIAN DEFENSE

To counter this *Wedge and Kessel* method of offense, even before the winter weather began the Russians achieved partial success by maintaining a flexible front, lightly held by infantry supported by mobile antitank and tank destroyer groups, traps and other antitank auxiliaries to stop or slow down the spearhead before encirclement could begin. Or else, with the defense organized in great depth, they struck at the encircling or kessel forces with highly mobile, well placed reserves of all arms, supported by combat aviation. Guerrilla and horse cavalry units have been employed in areas unfavorable to motor and mechanized units in order to attack and harass the flanks and supply installations supporting the wedge spearheads. On other occasions the Russian counterattacks penetrated the highly coördinated encircling tentacles of the German octopus and thereby caused a frustration of the operation.

In this effort the Russian Army has demonstrated a stability and morale hitherto unopposed to Germans during their projected campaigns of World War II. The German army, on the other hand, has disclosed a method of utilizing power-tactics hitherto unknown in military history.

In the offensive, the modified strategical and tactical principle of envelopment has survived since Cannae (216 B.C.) against which the defense that has been most successful has been the counterattack of relative strength applying the same principle.

Many are inclined to consider Napoleon's Russian Campaign as a parallel to what is transpiring today and might give one an index as to ultimate result. Such a conclusion, in our opinion, is misleading and dangerous. We might remember that General Morand stated: "The march of the Grand Army was first delayed by the Cossacks and later they cut it off from every source of supply and swarmed around its flanks like savage bees engaged in tormenting and exhausting a roaring lion with their innumerable stings." This irritating force, elusive and omnipresent, made itself especially felt at the time when Napoleon's cavalry, depleted in numbers and exhausted by hardship, was less than one-fourteenth of the strength of his infantry. His deficiency in light cavalry, more than weather conditions or any other cause, therefore, contributed to his downfall. It is not often that method can outstrip principle. The airplane has introduced a factor in modern warfare that, in the present German-Russian situation, could easily play the rôle of the Cossacks of 1812.

During this present winter we, in all probability, will witness the extensive use by both Germany and Russia of airplanes in combat, supply and troop transport operations in coördination with vast numbers of light tanks and horse cavalry.

The airplane-tank-horse combination* under unified command and aggressive leadership is to our mind the most redoubtable potential weapon in modern armies.

The effective exploitation during the present winter of this *new cavalry* with a superiority in strength and efficiency—employed in adherence to time honored cavalry principles—in our opinion, could make the greatest contribution by either side to a military victory.

For us the lesson is that we must look ahead, employ the utmost in vision based on solid realities, and devise our own tactical concepts to fit such theaters of operations and such opponents as *we* may expect to encounter.

*"Rome acknowledged that the Russians in the Donets sector were constantly attacking with *tanks and airplanes supplemented by cavalry* and on the Moscow front the Germans said that the enemy had launched 'heavy' blows."—*United Press*, Nov. 15, 1941.

★ ★ ★

CAVALRY IN CRETE

*By Major R. L. Howze, Cavalry**

I. General

TO students of military operations, the capture of Crete is, to date, the most interesting campaign of World War II. Nothing that had not been employed successfully before was introduced. Parachutists and air infantry had outstanding success in the operations in the low countries and France. Combat aviation in the rôle of long-range artillery in close support of ground troops was proved effective in every campaign starting with Poland. But in Crete, a task force transported by air and supported by an air fleet conquered an island garrisoned by a numerically superior force and supported by a navy immensely stronger than any sea fleet which could be brought against it.

It is not the purpose of this article to point out any lessons to be learned from this campaign, but to present for consideration what might have happened had part of the British force on the island been horse cavalry, reinforced by horse artillery. One reinforced cavalry brigade would have greatly influenced the outcome.

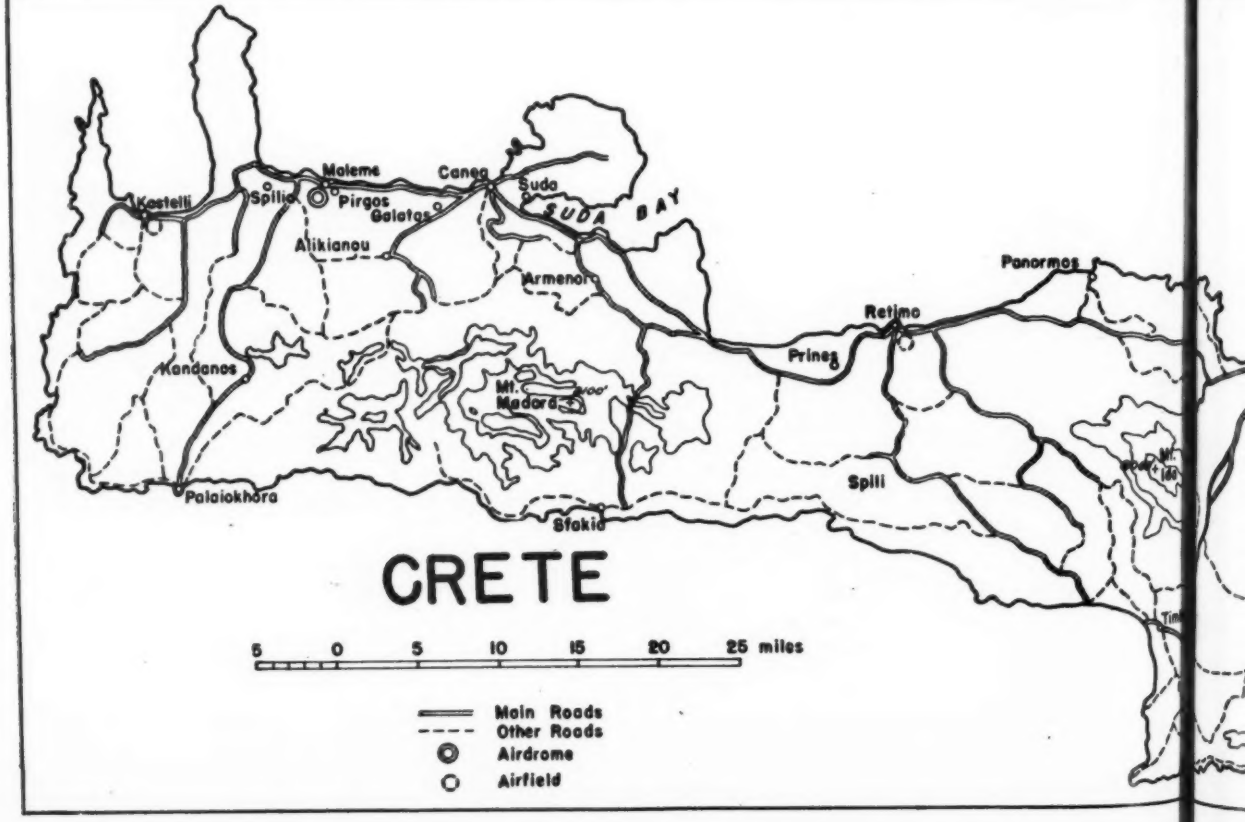
Crete is an island 160 miles long and varying in width from 7 to 35 miles. Its long axis runs generally east and west. The center of the island is mountainous and rises to three peaks, 8,100 feet, 8,000 feet, and 7,100 feet high, respectively, from west to east. The coast is unsuited for large scale landing operations. Roads are very poor. Third-class roads connect important points on the north coast. Coast-to-coast communication is by mountain track. Even if the roads were good, the road net would still be poor.

Canea, Retimo, and Heraklion are the principal cities. All are on the north coast, as is Suda Bay, the best anchorage of the island.

Airdromes existed at Maleme (west of Canea) and Heraklion, and airfields at Retimo and Kastelli. None of these could be considered first class.

The possession of Crete had various advantages. To the British, it provided the only air bases, after the loss of Greece, from which the Rumanian oil fields could be

*Office, Chief of Cavalry.



attacked. The anchorage at Suda Bay was immensely valuable to the navy.

The Axis wanted the island to provide security to shipping in the Adriatic and Ægean Seas, to restrict movements of the British Fleet in the eastern Mediterranean, and to provide bases for air operations in the Cairo-Alexandria-Suez Canal area and the western desert. Its position with respect to Turkey and the Near East was also important.

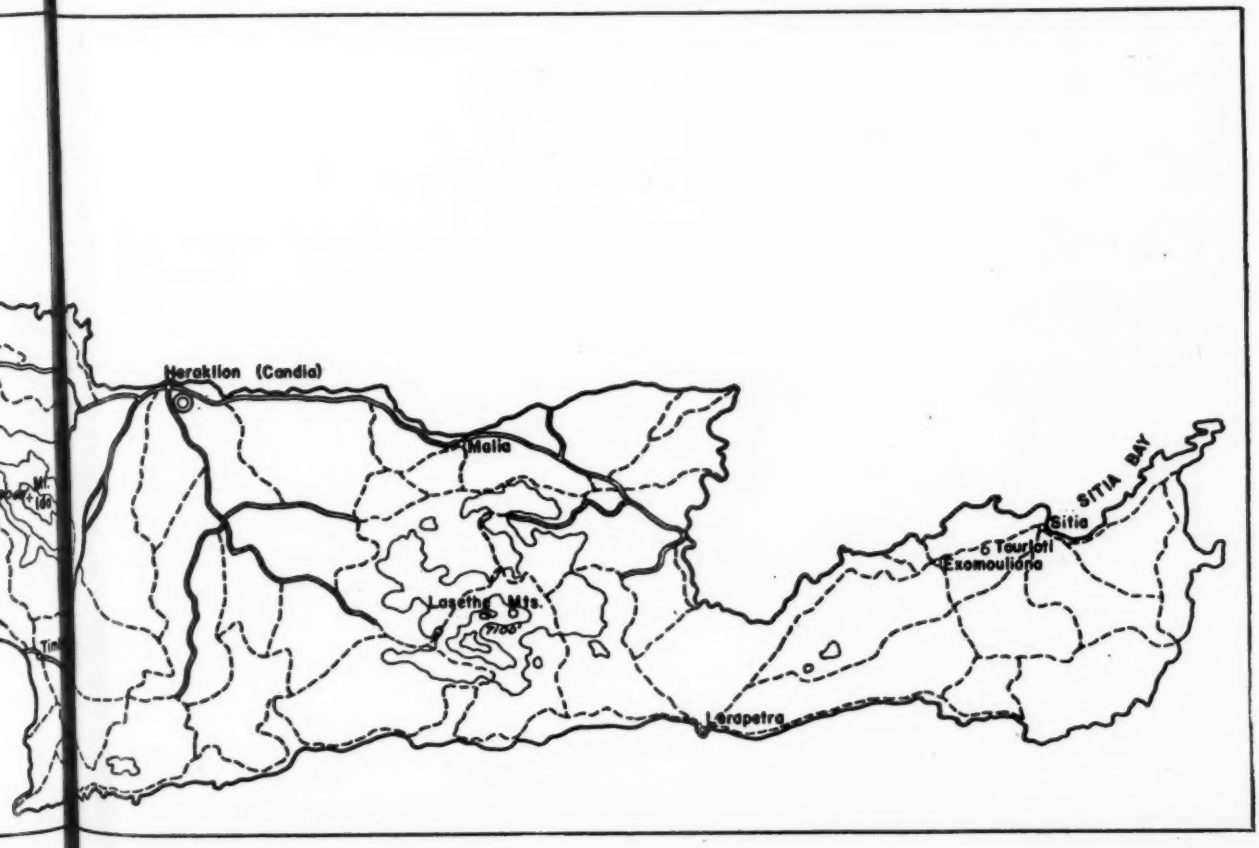
From November, 1940, the British garrison of Crete consisted of one infantry brigade. A few Greek replacement troops were also there. Following the Greek débâcle, the number of soldiers was increased by evacuées from Greece to approximately 37,500. So many of these were practically without equipment that it has been estimated that only about 12,000 could be considered fighting troops. Among the total were included about 4,000 Palestine and Cypriot labor troops, 10,000 Greek troops lacking much equipment, and many remnants of service units escaped from Greece. Sixteen airplanes, sixteen light tanks, and ten infantry (5-8 mph) tanks were on the island. There was some antiaircraft and artillery matériel, but not much.

The obvious objectives of an invader were the airfields at Kastelli, Maleme, Retimo and Heraklion, and the naval base at Suda Bay. The Allied dispositions were approximately as follows: 7,800 in the Maleme-Kastelli area; 4,400 in the Suda-Canea area; 760 between Suda Bay and Retimo; 6,000 in the vicinity of Retimo; and 6,000 at Heraklion. These garrisons add up to 24, 960, leaving about 12,500 Allied soldiers not accounted for. But only around 12,000 of the total were estimated as forming combat units. Apparently, each garrison had about fifty per cent of its strength in service echelons and the remaining 12,500 were employed as labor units on the roads and airfields, and in unloading supplies in Suda Bay. Most important, *there was no mobile reserve*. A few of the tanks were scattered among the garrisons. The location of the remaining few is unknown. They did not, however make their appearance as a unit during the fight.

The Germans, as usual, made complete and detailed preparations for the attack.

The forces which actually took part in the invasion consisted of the VIII Air Corps, based in Greece, and a ground force of three reduced strength divisions. The VIII Air Corps contained 360 heavy and dive bombers, 465 fighters and 650 transports. The ground force consisted of a parachute division of three *regiments* (4,950), an air-infantry division (5,600), and a two-regiment mountain division (5,000). In addition, there were motorcycle and antiaircraft units. The heavy organic supporting weapons consisted of 37-mm. antitank guns, 81-mm. mortars, 75-mm. infantry howitzers and 75-mm. mountain howitzers. The antiaircraft weapons probably did not exceed 37-mm.

Briefly, the German plan of operation consisted of three approximately equal parachute attacks on the air-



fields at Maleme, Retimo and Heraklion, to be followed by the landing of air-borne infantry and light artillery, wherever the preliminary attack was successful. An intense attack by bombers and fighters preceded the parachute attack.

II. The Actual Attack

The German preparation was conducted in three phases. The first phase, May 1st to 10th, was spent in visual and photographic reconnaissance and dive bomber and machine gun harassing attacks. The German plan was based on the results of this reconnaissance.

From May 11th to 15th, bombing and machine-gun attacks increased from day to day, both in frequency and intensity. Communications, concentrations and antiaircraft positions were bombed repeatedly. On May 15th, what was left of the R.A.F. withdrew to Egypt.

In the third phase, the attacks were directed mainly against sea-borne supplies, both en route and unloading in Suda Bay. Many of the British supplies were unloaded while the ships were burning and sinking. Attacks on the airfields were intensified in an effort to break down morale.

The real attack began on May 20th.

May 20th

An air attack of "unparalleled intensity" against the Canea-Maleme area was begun at dawn. At 8:00 AM, about 2,000 parachutists were dropped in this area. Parachutes were dropped in waves of about 600 each, *and about 400 of each wave carried equipment only.* At Maleme Airdrome, the 22d New Zealand Battalion was bombarded and machine gunned for ninety minutes and, before the cloud of dust and smoke cleared, a number of gliders (estimated at fifty) each carrying 12 men, landed in a dry creek bed. The passengers immediately took positions facing the New Zealanders and covered the landing of parachutists behind them. The defenders of this airdrome were overwhelmed. More parachutists interrupted communications on the Maleme-Canea road.

At 4:15 PM, parachutists landed in the vicinities of Retimo and Heraklion. As in the Maleme area, about a regiment was dropped on each place.

Losses of parachutists were appalling. However, these attacks were not defeated. At Maleme, the airdrome was captured, and at Retimo and Heraklion the remnants of the parachute regiments, although failing to capture the airfields, were a serious threat to the British positions, and prevented reinforcement of the hard-pressed garrison of the Canea-Maleme area.

During the evening, shortly after the capture of Maleme, the transports began to land on this field. British artillery still was in range, but the Germans took their losses and landed the infantry and mountain troops. Many crash landed on the beach. Casualties were probably heavy, both in personnel and planes, but an effective force was put on the ground.

The capture and holding of Maleme was decisive.

On this date, the British navy contacted a German water-borne expedition, convoyed by Italian naval units, on its way to Crete.

May 21st

German forces in the vicinity of Maleme began to push the British out of artillery range. The detachments of parachutists between Maleme and Canea and in the central part of the island continued to interrupt communications. Motorcycle detachments pushed south and west from Maleme.

May 22d

Motorcycle detachments captured Palaiokhora on the southwest coast and the airfield at Kastelli. Preliminary movements for an attack to the east from Maleme were continued. During the night of May 22d-23d, the British navy defeated and drove off the water-borne expedition. Axis losses in this naval action were extremely heavy.

May 23d-24th

On these dates, the German VIII Air Corps attacked the Britsh Eastern Mediterranean Fleet. With very little support from the air, the results were disastrous for the British. On May 24th, the fleet was withdrawn to Alexandria, and the Allied troops in Crete were entirely on their own.

May 25th-27th

The German drive to the east began in earnest. British positions around Galatas, key to the defenses of Canea, were penetrated. On the following day the penetration was deepened, and the German mountain troops began a flanking movement to the south, through trackless mountains from Galatas to south of Suda Bay. This movement was completed on May 27th and forced the fall of Canea. The British decided to evacuate Crete on May 26th, and withdrawals to the south coast began on May 27th. On this date, a small Italian force, estimated to be a regiment, landed at the extreme east end of the island. Their operations were slow and cautious and had no effect on the campaign.

May 28th

Withdrawals of British to the south continued. Rearguards suffered heavily.

May 29th

Contact with isolated parachute groups in the central part of the island was made by German motorcycle units supported by infantry in captured trucks. Heavy fighting between British rear units and pursuing German mountain troops occurred north of Sfakia. This village was the principal British embarkation point.

May 30th

British rear guards in the south were captured. The main body succeeded in escaping to Egypt. German troops in the vicinity of Heraklion were reinforced and

the British garrison at that place surrendered. The campaign was over.

III. What Might Have Happened

Obviously, the way to repel an attack by air-borne forces is to deny them a place to land. The preliminary seizing of landing places must be accomplished by parachutists and the passengers of gliders. Their defeat is accomplished by causing losses on the way down and immediately after landing, and by determined and speedy attack on small groups which have succeeded in landing and organizing. Delay will result in their being reinforced and becoming strong enough to take up offensive action.

At Maleme, the British adopted a perimeter defense of the airfield and were defeated. At Retimo and Heraklion, the defense was organized in depth, and succeeded in holding the fields. Organized groups of parachutists, however, remained a threat and cut communications between these points and the rest of the island. A mobile reserve should have been able to neutralize these isolated units.

What would have been the result of this attack had, say, 3,000 of the 12,000 Allied fighting troops been a cavalry brigade, reinforced by a battalion of horse artillery? For the sake of simplicity, consider this unit to be organized and equipped as U. S. Cavalry.

This force should be considered the mobile reserve, and disposed as follows:

One regiment and one battery of artillery on the northern slopes of Mount Ida (in the central part of the island).

The brigade, less detachments, on the northern slopes of Mount Madara in the west.

The remaining 9,000 of the combat troops should be distributed with 4,500 at Maleme and 2,500 each at Retimo and Heraklion. Patrolling should be conducted by infantry in trucks along the coastal plain.

As the number of tanks was small, they should have been disposed to take part in the immediate defense of the airfields. Had there been more, a portion should have been attached to the reserve.

The attack on Maleme began with parachutists descending at 8 AM. Between that time and late in the afternoon, parachute and glider troops succeeded in driving the defenders back from the airfield to the extent that air-borne infantry was able to use the field, but under artillery fire.

The garrisons of Heraklion and Retimo were successful in defending their airfields, but parachute groups had organized into first-class nuisances.

How to employ the reserve? It certainly should not be committed until it becomes obvious that the local garrisons have lost control of the situation and the enemy has gained the use of an airfield. But once this becomes apparent, it must strike and strike fast.

Consequently, when, early in the afternoon, on May 20th, it was known that Maleme would be lost, the portion of the reserve in the vicinity of Mount Madara should have been ordered to move. Moving rapidly across country in dispersed formation, its losses from the air would not be too heavy. Within two hours, a regiment of cavalry, supported by two batteries of artillery would be ready to attack the hostile parachutists *from the rear*. The New Zealanders, supported by their own artillery would coöperate, and the field would have been denied to the air-borne troops. Remember, Maleme was captured *by one regiment of parachutists and glider troops which had suffered horrible losses in landing*. They could not have withstood an attack from two directions.

Upon the movement from Mount Madara, the other regiment, less a reinforced squadron, should have been moved west, with its battery. The reinforced squadron would have provided a mobile reserve in the less danderous area, and a new reserve constituted in the area of the main attack within six hours. The length of time the Cavalry in the west took to clear up the situation there and reorganize would determine how far west this new reserve would move.

Having cleared up the situation at Maleme, consideration would be given to the isolated groups at Retimo and Heraklion. The garrisons there were undefeated. Coördinated action, taking one vicinity at a time, would quickly overwhelm the parachutists, for again, at each place there was a regiment greatly reduced by losses, and unable to withstand an attack from the rear. Finally, the lone Italian regiment in the east would be easy pickings.

After each counterattack, the Cavalry must be reorganized and returned to the reserve. Only under extreme circumstances should it reinforce garrisons.

Of course, had the British had more infantry, with ample truck transportation to move a reserve, perhaps the Germans would have been repelled. But its movements would have been road-bound, and subject to heavy dive-bomber attacks. The movement of the reserve had to be by daylight. Also, a brigade of tanks, part to reinforce local garrisons, and part as a reserve, would no doubt have won the battle. But bear in mind that the British didn't have the tanks to send, any more than they had the extra infantry to spare.

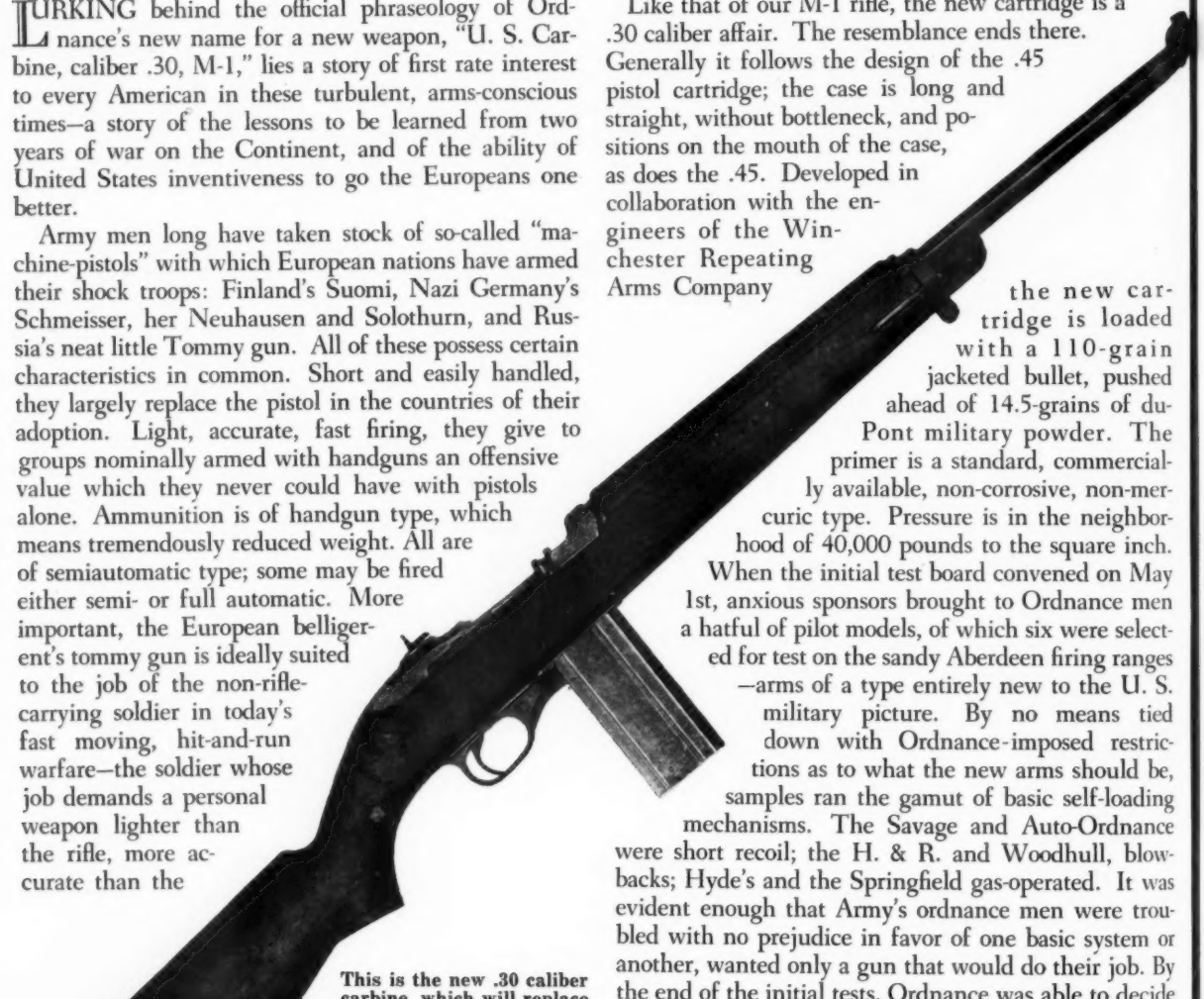
Crete was captured in the only way it could have been, so long as the British navy dominated the surface of the Mediterranean. It was garrisoned since November, 1940, by British troops. All other things being as they were, I believe that in those seven months Cavalry could and should have been sent there.

The British Fleet was defeated on May 23d-24th, and withdrew to Alexandria. It had, however, defeated the Axis water-borne expedition and eliminated it from the picture. It would take some time to organize another, and although hurt, the fleet was still a formidable threat to this type of invasion. Would a later water-borne invasion have succeeded? Perhaps, but that is not my story.

The New M-1 Light Carbine*

LURKING behind the official phraseology of Ordnance's new name for a new weapon, "U. S. Carbine, caliber .30, M-1," lies a story of first rate interest to every American in these turbulent, arms-conscious times—a story of the lessons to be learned from two years of war on the Continent, and of the ability of United States inventiveness to go the Europeans one better.

Army men long have taken stock of so-called "machine-pistols" with which European nations have armed their shock troops: Finland's Suomi, Nazi Germany's Schmeisser, her Neuhausen and Solothurn, and Russia's neat little Tommy gun. All of these possess certain characteristics in common. Short and easily handled, they largely replace the pistol in the countries of their adoption. Light, accurate, fast firing, they give to groups nominally armed with handguns an offensive value which they never could have with pistols alone. Ammunition is of handgun type, which means tremendously reduced weight. All are of semiautomatic type; some may be fired either semi- or full automatic. More important, the European belligerent's tommy gun is ideally suited to the job of the non-rifle-carrying soldier in today's fast moving, hit-and-run warfare—the soldier whose job demands a personal weapon lighter than the rifle, more accurate than the short-ranged pistol. U. S. Army's answer to the challenge resolved itself into a reply which will go far toward making our soldier the best armed in the world—"U. S. Carbine, caliber .30, M-1." Not intended as a replacement for the rifle, but rather as an auxiliary for the sort of job neither the rifle nor pistol can do effectively, the new carbine gives a great first impression. Trim and neat, it looks like business over every one of its stubby 36 inches, should make a tremendous hit with the 80 per cent of pistol-armed fighters whose .45's will be replaced in its favor. No sissy, the new carbine packs a wallop—15 rounds staggered in its long box magazine, speeds its 110-grain jacketed bullet at a mean velocity of 1,900 feet a second.



This is the new .30 caliber carbine, which will replace about 80 per cent of the .45 caliber automatic pistols now in service

Like that of our M-1 rifle, the new cartridge is a .30 caliber affair. The resemblance ends there. Generally it follows the design of the .45 pistol cartridge; the case is long and straight, without bottleneck, and positions on the mouth of the case, as does the .45. Developed in collaboration with the engineers of the Winchester Repeating Arms Company the new cartridge is loaded with a 110-grain jacketed bullet, pushed ahead of 14.5-grains of du-Pont military powder. The primer is a standard, commercially available, non-corrosive, non-mercuric type. Pressure is in the neighborhood of 40,000 pounds to the square inch. When the initial test board convened on May 1st, anxious sponsors brought to Ordnance men a hatful of pilot models, of which six were selected for test on the sandy Aberdeen firing ranges —arms of a type entirely new to the U. S. military picture. By no means tied down with Ordnance-imposed restrictions as to what the new arms should be, samples ran the gamut of basic self-loading mechanisms. The Savage and Auto-Ordnance were short recoil; the H. & R. and Woodhull, blow-backs; Hyde's and the Springfield gas-operated. It was evident enough that Army's ordnance men were troubled with no prejudice in favor of one basic system or another, wanted only a gun that would do their job. By the end of the initial tests, Ordnance was able to decide on three models for final consideration: the Hyde, Springfield and H. & R. In addition, two late comers, Turner and Winchester, would be put through their paces.

In outward appearance the five arms remaining are much the same. Harrington & Richardson's, an adaptation of their sub-machine gun, is a design of Eugene C. Reising, one of America's top-flight small-arms designers. Weighing 5.8-pounds, it is 38 inches long, has a 15-inch barrel, operates on a delayed blow-back system. The arm submitted by veteran George Hyde, nearly a half-pound lighter, is gas-operated, draws its gas from a port about 5½ inches from the muzzle, is shorter than the H. & R. by five inches.

Winchester's entry works on a recent and proven principle of taking gas off close to the chamber, before cooling can take place, thus preventing carbonization

*Courtesy, *The American Rifleman.*

Other entries in the Army's tests were (top to bottom) the Turner, Springfield, Hyde and Harrington and Richardson arms

of the piston and gas port. Seven and a half inches shorter and four and a half pounds lighter than the Army's Garand, Winchester's carbine weighs 4.63 pounds.

Tests for accuracy, sustained firing, exposure to weather, burial in gritty dust bring out merits and faults as relentlessly as would months of hard field use. Through these final tests one weapon stood out increasingly, standing more abuse, holding up longer under sustained firing, breaking fewer parts. By the time the test personnel had handled all of the weapons, witnessed all of the gruelling tests they were required to undergo, members of the group were unanimous in their opinion. The *Winchester* was voted best suited to military service.

Adoption of the new carbine will mean much to our Army. Offensive fire power, meaning in the final analysis potential *aimed* shots per minute, will be increased by nearly 33 per cent. Actually the increase of fire power will be greater even than that 33 per cent would indicate. Previously men in rear echelons depended upon riflemen for protection. Armed with the carbine, these men become an offensive threat themselves, relieve supporting riflemen for other tasks.

It is a far cry from the carbine of Grandfather's day obsoleted 35 years ago, to the semi-automatic "U. S. Carbine, caliber .30, M-1." The return of open, shifting warfare, the development of highly mobile fighting units and employment of parachutists and air-borne troops as shock forces, have made the position of troops behind combat zones extremely vulnerable. Far from being "safe behind the lines," our modern soldier may find himself face to face with armed, determined enemy fighters at any time, and anywhere in a zone of operations. With the new carbine, his chances of protecting himself and the success of his mission are increased tenfold.

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Please address all communications for The United States Cavalry Association and The Cavalry Journal to 1624 H Street, N.W., Washington, D. C.

General Hawkins' Notes

Responsibility for the Employment of Cavalry

THE success of a cavalry force depends primarily upon several factors. First, it depends upon the manner in which it is employed by the Commander-in-Chief; second, upon the way it is led by its immediate commander; third, upon the knowledge and initiative of its subordinate commanders, especially the leadership of its squadron and similar unit commanders; fourth, upon the training of its individual soldiers.

The recent maneuvers have shown that there is improvement over the past in the first three of these categories, but especially in the first.

There are, of course, other conditions necessary for success—the size and condition of the command, its equipment and its horses, the terrain, the weather and the quality of the enemy—but, given a good cavalry force, the first of the factors mentioned is perhaps the most important.

Napoleon's cavalry owed its success primarily to the manner in which he employed it—its tasks and missions, and the care he bestowed upon it. The same thing may be said of Lee's cavalry and of that of Stonewall Jackson when the latter commanded an independent force. The mediocre success, or failure, of the Federal cavalry in the first years of our Civil War were due to the same thing—the manner in which the army commanders employed it. Many illustrations to the same effect could be drawn from ancient wars, from the European wars of two hundred years ago, and down through the years to the World War of 1914-18. In that war, contrast the employment of the German and French cavalry forces with that in the army commanded by Allenby!

The great commanders of history have always employed their cavalry forces well. The present great war is the first in which large forces of cavalry have not been present. As everyone knows, this has been due to the great reliance placed in mechanized forces and the consequent neglect to provide cavalry forces of any important strength. On the part of Germany this provision was not necessary because of its overwhelming strength, compared to that of its enemies, in air force and mechanized force. Should the opposing forces be anywhere near equal in the air and in tanks, Germany would need large forces of cavalry. All of her opponents need large cavalry forces now. They would have done better in the past two years had they possessed such forces and had they known how to use them. Of course, reference is made to modern cavalry, not the antiquated European cavalry of the First World War.

The missions of this modern cavalry in modern warfare should receive intense study in our War College and our General Staff. As already intimated, one of the qualifications necessary in our new army commanders is a knowledge of cavalry and of how to use it skilfully.

Let us examine some of the items of knowledge that such a commander should possess.

In school problems and maneuvers there seems to be a tendency to assign to the cavalry component of a mixed force, tasks which are too great for the size of the cavalry unit involved. For example, a cavalry squadron is sometimes ordered to cover the whole front of an infantry division that is advancing in two widely spread columns. This has resulted in dispersing the cavalry unit so that it is out of the control of its commander and is not strong enough anywhere to deal with advanced elements of the enemy. In such a situation it would be much better to assign a mission of covering or reconnaissance that one squadron, under the control of its command, could reasonably be expected to perform. Otherwise, such a squadron is wasted. If this mission is not as comprehensive as the force commander would have wished had he had a cavalry unit of sufficient strength, he must make the best of what cavalry he has at his disposal. He should employ his cavalry where he believes it is most needed. If it is a matter of covering the advance, the squadron should be sent by positive and definite orders to cover the wing of the force which seems most important. Some other means must be used to cover the other wing. If it is a matter of reconnaissance, the force commander should send his cavalry to definite points or localities to answer certain definite questions. This is a responsibility that the force commander cannot avoid. It would be a great mistake to give the cavalry squadron commander an indefinite mission of wide spread reconnaissance according to some academic formula. No cavalry unit should be expected to spread itself so widely that it is out of control of its leader.

Similarly, an army composed of several army corps but only one cavalry division could not expect of that one division all of the service that an adequate cavalry force could give. It seems almost silly to say that a cavalry unit of a certain strength cannot do more than

its strength permits. Nevertheless, it has often been remarked about some particular campaign that the cavalry did not perform the functions expected of cavalry, whereas the real reason for apparent failure was the absence of any cavalry force of adequate strength for important duties.

We can state in general terms what the missions or duties of cavalry are in modern war, but few persons seem to realize what the strength of the cavalry should be to perform those missions.

A force commander should not use his cavalry as he would his armored force. Both of those weapons are necessary but they have different functions. The armored force is a new weapon. It is not cavalry and has not usurped the duties of cavalry. The cavalry mobility should not be used in competition with armored force mobility. Cavalry mobility remains what it has always been and it should be so used. Mechanized mobility is a new thing and should be used as such. Cavalry mobility applies particularly to cross-country movements. Mechanized mobility applies especially to roads and favorable terrain. Herein lies the secret of the different employment of these two arms. Infantry still remains the main body of the fighting forces as is evidenced by the enormous number of infantry divisions in operation in the greatest of campaigns now being fought between Germany and Russia. For certain purposes cavalry still has the advantage over infantry in cross-country mobility. The new armored force has a great advantage over cavalry in road mobility which can also be used for certain purposes.

The Air force also is a new weapon. It has certain advantages over artillery, but it does not usurp the rôle of artillery. It simply makes it possible to extend the power of artillery under certain circumstances. The commander of a force must use his artillery and his air force differently. Of course, the air force has other uses also, such as reconnaissance and observation, and sometimes completely independent missions.

It follows, therefore, that the commander of a mixed force should not use his armored force for cavalry missions nor his cavalry for armored force missions.

There is yet another arm to be developed. It is the antitank force. Infantry and cavalry must have a few antitank guns in each of their regiments, but the large mass of antitank guns must be organized into an antitank force.

Thus, we now have several new arms of the service for the commanding general to employ; and he must know how to employ them all—old as well as new.

In a previous article I have written about the missions of the modern cavalry. The commanding general must know them as thoroughly as he does the employment of his other arms. Without this modern cavalry the army is just that much weaker, that much handicapped. This is certainly true, no matter what they are doing in Europe, Africa, or Asia, or what may come to pass in the Americas.

Good cavalry is hard to make. It could not be improvised during a campaign just because someone had discovered its usefulness. *Every field army should have a cavalry corps.* Without this provision we could not expect our army commander to understand how to employ cavalry should the occasion arise. Every army commander who has studied our modern cavalry and its possibilities will certainly have occasion to use it and be very thankful for it.

Useless missions wear out the cavalry to no purpose. It is then not available for important missions. The tendency to run the cavalry off its legs should be avoided unless it is the last act of the war. The army commander should know his cavalry so well that he will not make this mistake. If the mission is that of attack or delaying action, the army commander must know what to expect of cavalry units of various sizes. He must aim not only to use his cavalry but to preserve it also for future use. He must rely greatly on the initiative of his cavalry commander but he must give him very positive and definite orders, such as he would to any other component of his command.

This fine and necessary understanding, and the very useful results from cavalry properly employed, can never be realized if the attitude toward cavalry in the army is not materially and intelligently changed.

If We Don't All Hang Together . . .

It ain't the guns or armament, or the money they can pay;
It's the close coöperation that makes them win the day;
It ain't the individual, nor the army as a whole,
But the everlastin' teamwork of every bloomin' soul.

—J. Mason Knox *in Coöperation.*

HORSEMASTERSHIP

Four Exercises to Train Remounts and Reclaim Spoiled Horses

*By Brigadier General Harry D. Chamberlin, U.S.A.**

Note: Before studying this article, Changes 1, F. M. Animal Transport (25-5) should be carefully studied and each detail thoroughly understood.

THE four simple exercises herein described will not only serve to train all colts and remounts, but also will render older horses obedient and supple for military and other equestrian purposes, such as polo, hunting, and jumping. In fact, before negotiating a single obstacle with a hunter or jumper, or before practicing with stick and ball on a polo pony, these four exercises should be thoroughly taught, and practiced over and over again. Many remounts, jumpers, and polo ponies are permanently injured physically or spoiled temperamentally because they are respectively placed in ranks, started at jumping, or put in a polo game before having been taught to execute properly and calmly the movements required in the four exercises. On the other hand the exercises themselves can be executed by mediocre riders, provided the work is under the supervision and direction of capable horsemen. Many spoiled and headstrong horses can also be reclaimed by the same simple system.

The reader will discover that the exercises not only train and subdue the horse, but also teach him and the rider the five rein effects as well as the effects of the legs used either singly or in conjunction. In the beginning the exercises are taught in the order given. When learned fairly well they should be intermingled.

Exercise No. 1

The first exercise consists in riding the individual horse on a circle of about fifteen to twenty-five yards in diameter. He is guided solely with *the inner "opening," or "leading" rein.* The principal purpose of the exercise is to "take the edge off the horse" and thus, without a fight, render him calm, obedient, and attentive. However, many other benefits which result as by-products will be pointed out.

Always begin at the walk, until circulation in the feet is assured. As soon as this is accomplished, take up the trot. *The opening rein must be employed, not the direct rein; that is, there is no tension on the rein unless absolutely necessary to control the horse.* For example, when circling to the right, the right rein is carried out and to the *right front* and is used with "alternating" effects (not a steady tension). The leading effect is applied and continued until the horse both follows the desired path and bends his neck to the right with relaxed muscles. At the exact instant when the relaxation of the neck occurs the rein effect ceases by allowing the rein to go slack momentarily. As the rider "feels" the horse is about to branch off on a tangent to his circle, he reapplies the leading rein and continues its effect until the horse again concedes as just described. This is what is meant by "alternating" effects of the reins. Total relaxation cannot be expected until the horse's first friskiness and exuberance have worn off. Then he soon learns that when he obeys the reins and relaxes he is *instantly* rewarded by escaping the annoyance of the bit. This is the basis of all horse training, i.e., instantaneous reward for obedience through ceasing all use of the aids when the horse concedes. The reward *must be instantaneous*—never so much as one second *after* the horse obeys. If the reward is a fraction of a second tardy he will not associate his concession with escape from the annoyance of the aids.

Thus the light leading effects are used with just sufficient frequency and intensity to keep the horse on the chosen circle. The left rein is entirely passive and "floating"—rather than stretched taut. (It is amazing to note how few riders can keep one hand entirely passive while the other one is active!) The left rein is only used in two cases. First case: if the horse's trot becomes so rapid that there is danger of his breaking into the gallop, a *minimum amount* of *direct tension* on both reins must necessarily be applied momentarily in order to prevent his doing so. Also increase your forward inclination when applying the tension rather than leaning heavily backward. Reins should work exactly parallel with each other in this case and the bit be slowly and gently sawed ("vibrated") through the horse's mouth. The moment he settles to the trot, resume the leading rein. Permit him to trot freely and fast rather than fight his mouth to maintain a regulation or slow trot. Second case: if a horse is inclined to be rubber-necked (i.e., bend his neck too far to the right in answering the right leading rein), the left rein should be lowered so

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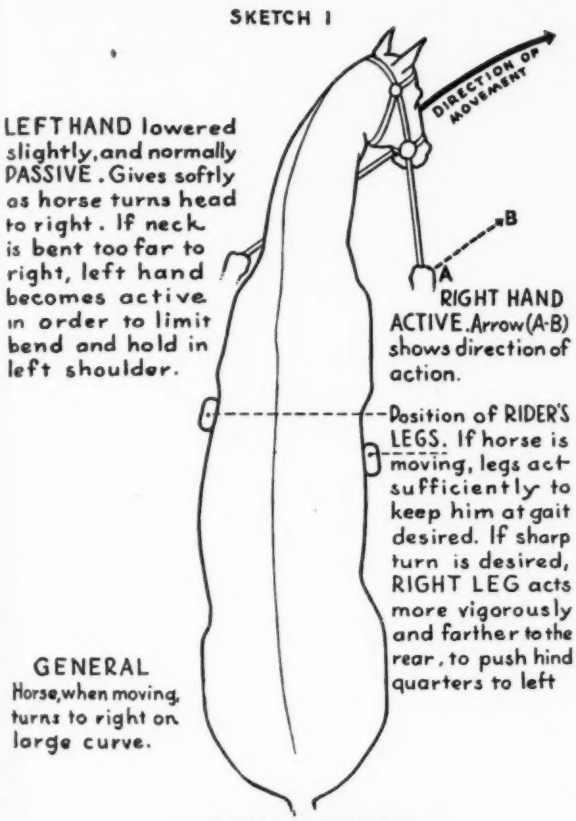
*Commanding the 4th Cav. Brig.; 2d Cavalry Division, Camp Funston, Kansas.

General Chamberlin, an internationally recognized authority on horsemanship and horsemastership, is the author of several books on the subject, published in England and in the United States.


SKETCH 1
LEFT HAND lowered slightly, and normally PASSIVE. Gives softly as horse turns head to right. If neck is bent too far to right, left hand becomes active in order to limit bend and hold in left shoulder.
DIRECTION OF MOVEMENT
B
A
RIGHT HAND ACTIVE. Arrow (A-B) shows direction of action.
Position of RIDER'S LEGS. If horse is moving, legs act sufficiently to keep him at gait desired. If sharp turn is desired, RIGHT LEG acts more vigorously and farther to the rear, to push hind quarters to left
GENERAL
Horse, when moving, turns to right on large curve.

1st REIN EFFECT
Right Opening, or Leading Rein

that the left hand is near the upper part of the horse's left shoulder and just enough tension intermittently applied to the left rein to prevent the horse's bending his neck exaggeratedly to his right. The left rein thus exerts a limiting effect to the bend of the neck. (This is also the one and only case where the hand need be *lowered* to a point where the rein and forearm do not form a straight line. The hands are very frequently *raised* to secure the correct effect on the bit but only lowered in this specific instance.) See paragraph 9 *i*, (1), Changes 1, *F. M. 25-5.*

As the horse becomes calm, the neck should bend uniformly from shoulder to poll and gradually become entirely relaxed and soft. As indicated above, do not endeavor to compel him to trot slowly. Always ride well forward, with weight somewhat over the inside shoulder. This frees the horse's loin from irritating pounding and helps to induce a maximum extension accompanied by a lowering of his head and neck. Calmness is never obtained with a spirited or nervous horse until he is taught to work with an extended and naturally carried head and neck. Soft relaxation of the jaw (chewing on the bit) and a *lateral bend of the neck* usually will soon develop with this exercise if the rider's hands are clever and soft. The hand is kept rather high so that the leading rein tends to act approximately *parallel to the long axis of the horse's head.* If the hand acts perpendicularly to this long axis it will usually overflex the neck and poll and render the horse fretful from constraint. Inevitably, the right leading rein occasionally will have to be used with a little tension to the *right and rear,* particularly with an impetuous horse. Remember, however, to limit tension to an absolute minimum.

Thus, with minimum rein annoyance the horse is allowed to trot on the circle until his playful exuberance has subsided. The exercise is then repeated on a similar circle to the left hand. *If he has any tendency to carry his head high, the rider's inside leg should predominate, pushing the croup slightly to the outside of the circle.* This mobilization of the haunches requires the horse to lighten his hind quarters because they are forced to cover more ground than the forehand. Consequently he soon automatically increases the weight on his forehand by lowering his head and neck. As he becomes calm and obedient, the rider should begin to establish light tension on both reins so as to secure very delicate contact with the horse's mouth. Thus he is gradually taught to "accept the bit"—with his head and neck in a natural, graceful, and extended posture. Remember that if he raises his head too high your hands also move higher in order to make his mouth uncomfortable by slowly and moderately sawing the bit with slightly *increased* tension. *He must not be allowed to escape the bit for so much as a second until finally he seeks relief by lowering the head. Instantly he is rewarded by softening the hands and allowing him to lower his head to a natural position.* You must sustain the gait by appropriate use of the legs while holding the horse's head high, as the additional pressure on the bit tends to slow or stop him. That we have any high headed horses in the army is a sad, though tacit commentary on our riding and horse training!

Depending upon the energy and condition of the horse, exercise on the circle will take from 5 to 20 minutes on each hand, or a total of from 10 to 40 minutes. Where the horse is very "high" or very sensitive, stubborn, etc., he should, prior to any mounted work, *always be worked on a longe until calm and relaxed.* The longe properly used is of enormous value and all officers and noncommissioned officers ought to be skilful in its employment. Many an old but energetic and difficult horse can be quieted and made pleasant to ride by plenty of work on a longe each day before he is mounted. Longeing also will subdue and reclaim many so-called *bad* horses. If necessary, longe such rogues three or more hours daily in two or more periods until through boredom and fatigue they come around to going quietly under the sadde.

With young or difficult horses always execute the exercises and use the longe in a hall, pen, or corral when one is available, since there will be fewer distractions and the horses will be more attentive and responsive.

After having worked the mounted horse on circles such time as is necessary to cause him to trot quietly with his head and neck extended and low, he should be allowed to walk on a *loose rein* for several minutes and caressed by pats on the neck. Many riders are quick to punish and far too slow to reward. He is then pushed into the canter and again worked around the circle, first on one hand and then on the other, until completely soft and amenable at this gait.

In taking the gallop depart on circles, the rider should switch to the outside direct rein and outside leg aids. Use the direct rein effect very lightly in order to weight the outside shoulder just as the legs are used to force the horse to break into the gallop. The outside leg is used more vigorously than the inside and a little farther to the rear. The leg aids, just as the hands, should always be employed alternating—yielding instantly to obedience—resisting (acting) instantly against resistance or disobedience.

Naturally, long periods of work can be given to a remount only after he has been conditioned by longeing and leading until his wind, legs and muscles are fit. Early lessons should always be short and frequent. Three short lessons daily are of much more benefit than one long lesson. Often it is necessary to longe an older and fairly well trained horse, which through being without exercise for some time is bursting with fire and exuberance, for several days before he will be sufficiently quiet and relaxed to ride, even on a circle, without his fighting your hand. Moreover, after all this longeing, it will be found that the trot *only* can be used when mounted for several days because the horse is still too lively to gallop without fighting the bit and resisting in other ways. Patience and intelligence on the part of the rider and hours of slow work both on the longe and by leading prior to riding will gentle, relax, and make manageable most any horse. With an intelligent group of men, a remount squad can be organized in a troop, squadron, or regiment which will produce amazing results by the system here advocated with either remounts or rogues in an astoundingly short period of time.

It will be noted that this first exercise accomplishes the following:

1. Calms the horse through:
   - *a* steady work;
   - *b* permitting an extended and natural head carriage;
   - *c* not annoying the mouth so as to provoke resistances.
2. Teaches the horse:
   - *a* relaxation of his neck in obtaining a lateral flexion;
   - *b* relaxation of the jaw by vibrating the reins;
   - *c* obedience to the leading rein;
   - *d* obedience to action of rider's inside leg through mobilizing the haunches;
   - *e* relaxation of the spine as he bends lightly around the rider's inside leg when mobilizing the haunches;
   - *f* natural extended carriage of the head and neck as well as acceptance of the bit (a well-trained horse only needs the lightest sort of support from the hands);
   - *g* the gallop departs and the aids therefor.

2nd Exercise

(NOTE) This exercise is not attempted until the horse is calm at the trot on the circle.

The greatest difficulty in riding horses either for military purposes or for sports, such as hunting, jumping, or polo, is to regulate the gait (commonly called rating), change the gaits, and to halt. *Absurdly enough while these three items are the most difficult to execute, few riders ever attempt to train their horses to go at any desired rate, to decrease the gait readily or to halt under all conditions promptly and without resistance.* Needless to say, all should be practiced over and over again. Instead of riding a young horse for an hour or more and halting only upon returning to the stable *he should be halted and required to change gaits and rates literally hundreds of times during that time.* If the routine to be described below is followed, there will be few horses that will not only halt quickly and decrease gaits readily when being ridden alone but will do likewise in ranks, at polo, hunting and jumping. Not only does the following exercise teach the horse regulation of gait and rate but it develops his natural balance. Again let it be stated for emphasis that everything described hereafter should be repeated over and over again.

Halting

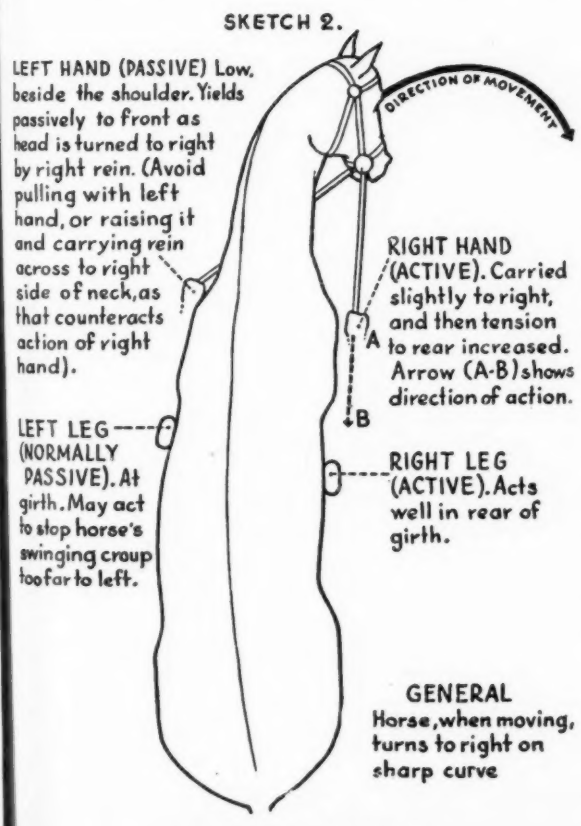
Before describing the 2nd Exercise in detail the correct manner of halting the horse—or decreasing the gait—will be stated. The semi-relaxed fingers are closed on the reins and the hands and elbows diminish the amount of backward and forward play used in following the mouth. Thus the hands gradually become more or less fixed in position relative to the rider's body, at the same time retaining a certain elasticity to prevent jerky action. Since during breaking no flexion of any sort is demanded, all action of the hands, wrists, and elbows should be *softly* and *progressively* executed when setting up increased tension. *The hands resist, in contradistinction to pulling,* so that when the colt concedes, *they do not fly in toward the body, but instead, instantly relax and move forward to reward his obedience.*

In the beginning several successive resistances are set up, the fingers softening momentarily to reward each diminution in the gait. To fix the hands in continuous resistance, as may be done with a trained horse, will break, or over-flex, the poll, which must be avoided. Turning his head *just the least bit* to the right or left and then equalizing the tension on the two reins will expedite the first halt with a contrary colt. This turning

at successive halts should be alternately to the right and left, and as soon as he responds readily, the halt is required in the normal manner with his head square to the front.

The head and neck should not be appreciably raised or otherwise displaced while halting. The moment the halt is consummated, all tension is released from the reins as a reward. The rider does not lean backward, but remains inclined forward from the hips, increasing the pressure with his knees and the downward thrust of his heels in order to keep his seat from sliding forward on to the pommel. To throw the weight backward interferes seriously with the horse raising his croup and engaging his hind legs. Always raise the hands slightly in halting or decreasing rate or gait. If the head is excessively raised the hands are raised correspondingly and light sawing action exerted until the horse seeks respite by lowering his head to a correct position. *Never let the horse escape the hand by raising or turning the head.* Each such escape tends toward your domination by him and his ruination by you.

After the horse has become thoroughly relaxed and calm on the circle and accepts light contact with the hand, *he should be required to walk on a long rein and halted every few steps.* The *instant* he halts the fingers should be completely relaxed and the reins allowed to hang entirely loose while the colt is permitted to rest in place and is patted on the neck for several seconds. Next he should again be moved forward in response to the rider's legs. Dot not contradict the legs by pulling on the reins as the horse moves forward. As soon as he learns to halt promptly and stand quietly, the periods during which he rests should be made progressively briefer so that he *halts only a second or fraction thereof before being urged forward again by the rider's legs.*


SKETCH 2.
LEFT HAND (PASSIVE) Low, beside the shoulder. Yields passively to front as head is turned to right by right rein. (Avoid pulling with left hand, or raising it and carrying rein across to right side of neck, as that counteracts action of right hand).
DIRECTION OF MOVEMENT
RIGHT HAND (ACTIVE). Carried slightly to right, and then tension to rear increased. Arrow (A-B) shows direction of action.
A
B
LEFT LEG (NORMALLY PASSIVE). At girth. May act to stop horse's swinging croup too far to left.
RIGHT LEG (ACTIVE). Acts well in rear of girth.
GENERAL
Horse, when moving, turns to right on sharp curve
2nd REIN EFFECT
Right Direct Rein of Opposition

Next, changing from the trot to the walk and vice versa is practiced. After walking quietly for a few moments, he is squeezed into the trot and as soon as he settles to a steady, balanced movement he is brought back to the walk and kept at this gait until complete calmness occurs. The periods at the walk or trot should be briefer and briefer, and the changes more and more frequent. After a few lessons much practice also should be given at extending the trot little by little, then bringing the horse gently back to a slow trot; then to a halt. When this exercise is executed well, the horse should be brought from the normal trot directly to the halt, then moved out at the normal trot again. To reiterate, these exercises must be repeated over and over and over again. *Also the rider's hand must give the horse's mouth entire freedom the moment he halts.* If the hands and legs are skilful the horse will soon obey the lightest effect. As soon as resistance or displacement of the head develops in halting or slowing the rate, similar work at a slower pace should be resumed. In other words, if the horse resents halting from the trot, more work in changing from the trot to the walk and from the walk to the halt is necessary. *The preparation for the halt from the trot has not been complete.* The exercises can be greatly elaborated and made more difficult as obedience and calmness become habitual.

For example, move (a) from halt to slow trot, to normal trot, to extended trot, to normal trot, to slow trot, to halt; (b) from halt to normal trot, to extended trot, to normal trot, to halt; (c) from halt to extended trot, to halt. When the horse is fully prepared, he should come to the halt from the extended trot in about six or seven steps, but such tests are not attempted until after good condition is acquired with calmness and obedience normal. *The prompt moving out after a halt, and prompt, smooth, increasing of speed after it has been reduced, are vitally essential to teach the horse to collect himself naturally.* Without displacing his head unnaturally he very soon learns to check or halt with his hind legs advanced well under his belly ready to spring quickly forward. He moves and handles himself as does a horse at liberty, using his head and neck (balancer) naturally, and works at maximum efficiency.

These gymnastics can be executed on circles, straight lines, or the serpentines and zigzags, to be described under Exercise 3. If a horse is exceedingly "hot," it is usually best to keep him on circles until he becomes perfectly calm. After all the work involving the halts

and changes of rate and gait described above are performed easily and promptly, similar work at the canter and gallop, etc., should be given as: (a) from canter to gallop and reverse; (b) from trot to canter to gallop, and reverse; (c) from canter to walk, to halt, and reverse; (d) from canter to halt and reverse; (e) finally, when the horse becomes strong, conditioned, obedient and calm, he should halt in a few yards from the extended gallop, promptly back a few steps and spring forward again gracefully and without excitement into the gallop.

From this exercise he learns:

1. Obedience to the direct reins through halting or slowing down in answer to tension or resistance by both hands. NOTE: Extreme care should be taken that the hand *resists and does not pull.* In other words, if the rein, held by a resisting hand, were cut, the hand would not fly to the rear; whereas in the case of the pulling hand, it would.

2. Obedience to the legs—i.e., moving forward frankly, energetically and promptly in answer to pressure from the rider's calves or spurs. (A horse should gradually be taught to fear an attack from the rider's legs more than anything else in the world.)

3. To engage his hocks naturally at all appropriate times.

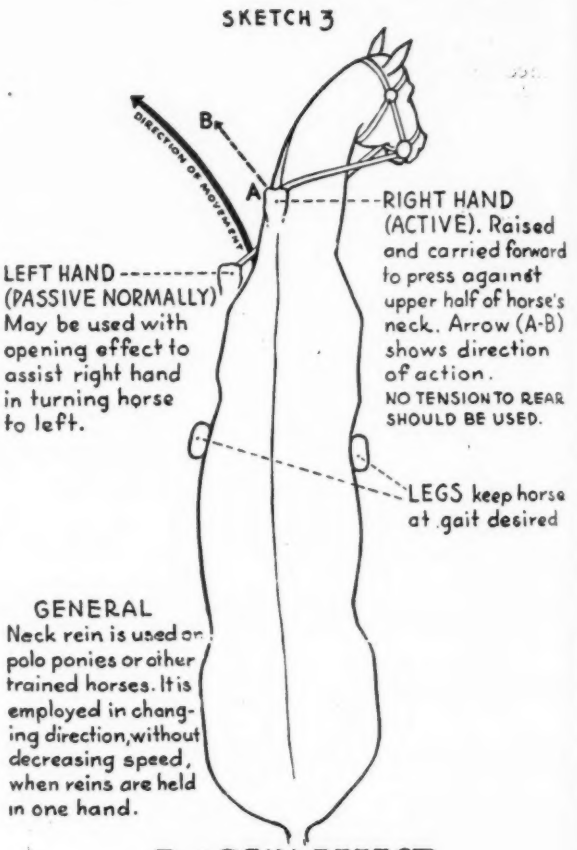
4. To move lightly in good balance.

5. To slow the gait or halt almost instantly in answer to light rein indications.

3rd Exercise

The third exercise consists in schooling the horse, first on serpentines described on large curves, and later, as his training progresses, on zigzags arrived at by progressively reducing the radii of the serpentine curves until sharp changes of direction of approximately 180° are executed on the hind quarters as a pivot.

In these movements, the "bearing" or "neck" rein only is employed. For example in using the right "bearing," or "neck" rein when turning to the left the *right hand is carried just across the crest of the neck, and acts toward the left front.* To be most effective, it should bear against the right side of *the upper half of the neck,* as this part is more sensitive than that near the shoulders. It is an artificial effect in that it is not powerful, but is habitually used with cavalry horses and polo ponies to change direction without changing speed, whenever the reins are held in one hand. By first using the *left opening rein* and immediately thereafter alternating it with the *right bearing rein,* obedience to the *right bearing rein alone* is quickly taught. The effect is to turn the horse's nose upward to the right, and force the bulk of the weight of the neck onto the *left* shoulder. While this effect is not strong the horse's balance is shifted toward the left front tending to cause him to turn to the left. When working with a green colt, the rein is used intermittently each time the left foreleg is moved. If the rider's right (outside) leg is used in conjunction with the right bearing rein the horse soon learns to engage


SKETCH 3
DIRECTION OF MOVEMENT
B
A
RIGHT HAND (ACTIVE). Raised and carried forward to press against upper half of horse's neck. Arrow (A-B) shows direction of action.
NO TENSION TO REAR SHOULD BE USED.
LEFT HAND (PASSIVE NORMALLY) May be used with opening effect to assist right hand in turning horse to left.
LEGS keep horse at gait desired
GENERAL
Neck rein is used on polo ponies or other trained horses. It is employed in changing direction, without decreasing speed, when reins are held in one hand.
3rd REIN EFFECT
Right Bearing or Neck Rein

his haunches and to pivot on the hind quarters in changing direction.

Since the horse during the first part of his lesson has been calmed by work with the opening rein on circles changes of rate and gait and by halts, the exercise on serpentines and zigzags may be begun at the trot. In this work the rider habitually uses the outside leg to engage the haunches. In other words, the haunches are kept on the inside of the curve of the serpentine. Thus, travelling over less ground than the forehand, the horse as a result must lighten the weight on his forelegs at the expense of his hind quarters. This tends to improve his balance and render him light to effects of the hand. As soon as he appreciates the significance of the bearing rein the inside hand (leading rein) is entirely passive. For example, as he turns to the left, the right bearing rein and the right leg are used; as he turns to the right, the left bearing rein and left leg are active. Of course, if the horse attempts to escape the hand and whirl around too rapidly or to cut inside of the path which the rider desires to traverse, effective corrective measures must be applied by the inside leg and rein. As a variation, and to obtain complete control, the rider should occasionally *mobilize* the haunches on a serpentine. *Never permit a horse to become routined.* Later on

when serpentines and zigzags are used at the gallop, he should be brought to the trot just prior to changing direction, otherwise he will be required either to change lead or *gallop false* on the half turns. Until complete obedience and much experience are gained, no attempt should be made to require the change of lead at the gallop. In fact, the trooper's horse and the polo pony as a matter of self preservation when necessity demands, will learn without special schooling the changes of lead at rapid gaits.

As the horse becomes obedient, calm, and relaxed in changing directions in response to the outside leg and neck rein, turns should be made sharper and sharper until it is made by pivoting with the hind legs remaining almost in the same place. Since he has been given many lessons in halting, each sharp change in direction should be executed by first indicating a partial halt with both direct reins (using the hand in a *high position*) and immediately thereafter by applying the neck rein and outside leg to secure the turn on the hind quarters. Many, many halts should be executed while exercising on the serpentines or zigzags. Inevitably horses will sometimes resist the turn, in which case the neck rein must be changed to what is known as the "indirect rein of opposition in front of the withers." Taking the right rein for an example, instead of acting to the left front, it now acts to the left rear across the horse's neck *but in front of the withers*. Such *tension* as is necessary is applied in order to secure a sharp turn to the left, remembering always that the right leg assists as strongly as necessary in holding the haunches in place. It also may be necessary to employ the left direct rein in combination with the right indirect rein of opposition if the horse presents marked resistance. All resistances are certain signs of insufficient training at slower gaits and during preceding exercises.

The horse should often be worked on circles with the bearing rein as well as with the opening rein after this 3rd exercise has been taught.

This exercise teaches the horse:

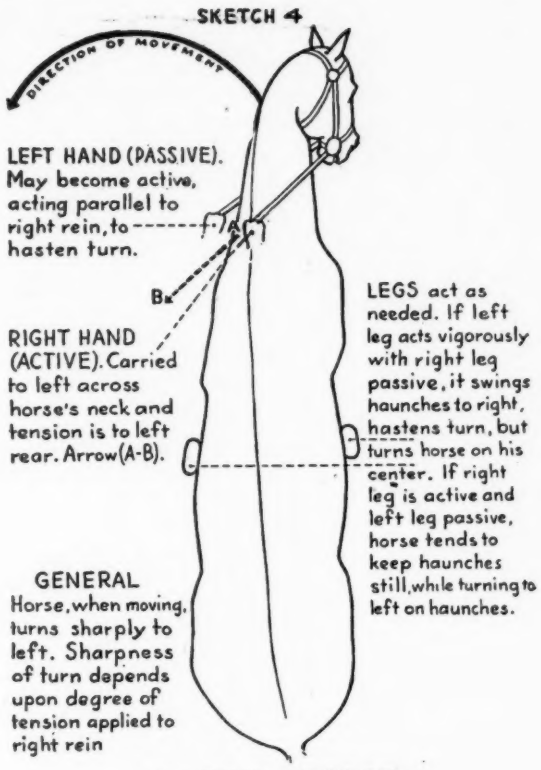
1. Obedience to the bearing rein;
2. Obedience to the rider's outside leg;
3. Lightness of the forehand;
4. Engagement of the inside leg on all turns;
5. Agility and natural balance.

4th Exercise

Shoulder-In

This last exercise is not difficult and is the *most valuable of all gymnastics given a horse*. Having taught mobilization of the haunches on the circles and occasionally on serpentines, there will be no difficulty in securing the shoulder-in from any horse by even a mediocre rider who is properly supervised and directed.

Taking "right shoulder-in" as an example; *the horse is bent symmetrically throughout his spinal column, from poll to point of croup, around the rider's right leg, and moves toward his left front with his body set ob-*


SKETCH 4
DIRECTION OF MOVEMENT
LEFT HAND (PASSIVE). May become active, acting parallel to right rein, to hasten turn.
B
RIGHT HAND (ACTIVE). Carried to left across horse's neck and tension is to left rear. Arrow (A-B).
LEGS act as needed. If left leg acts vigorously with right leg passive, it swings haunches to right, hastens turn, but turns horse on his center. If right leg is active and left leg passive, horse tends to keep haunches still, while turning to left on haunches.
GENERAL
Horse, when moving, turns sharply to left. Sharpness of turn depends upon degree of tension applied to right rein

4th REIN EFFECT

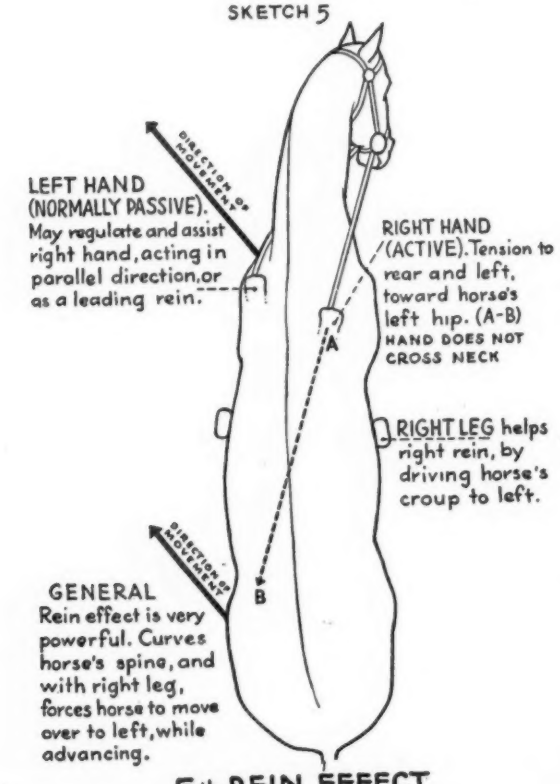
Right Rein of indirect opposition (in front of the withers)

liquely to the line of motion. This requires him at each step to cross his fore and hind feet, respectively. The movement is obtained by: (1) shortening the right rein; (2) beginning a turn to the right with the right opening rein; (3) just as the horse's forehand is led off the straight line which he has been following, the leading rein is changed into a *"rein of opposition in rear of the withers,"* which acts in the direction of the *left haunch;* (4) at the same instant, the rider's right leg is carried back a few inches and used to force the horse's croup to the left; (5) the left rein, with combined opening and direct effects, assists in conducting the horse in his oblique attitude along the same straight line he has been following; (6) the left leg aids the right as necessary to sustain impulsion.

The horse thus is bent around the rider's right leg so that his right shoulder is inside the curve made by his own spinal column. Obviously his right fore and right hind legs at each step must cross over in front of the left fore and left hind, respectively. If the rider is unsuccessful in obtaining shoulder-in along a straight line, further preparatory work in mobilizing the haunches, and in schooling with the "rein of indirect opposition in rear of the withers," while moving through the corners of an enclosure is indicated. The horse is simply *pushed* into the corners by this rein effect and the rider's inside leg.

The benefits of shoulder-in are manifold. If the horse is gradually required to carry his head in a low position, a soft, relaxed lateral bending of the well extended neck occurs. *Alternate resisting and relaxing of the fingers,* which is necessary to keep the horse oblique to the direction of motion, will secure complete relaxation of the jaw, as well as a slight flexion of the poll as the horse gives himself entirely over to his rider. The crossing of the fore legs involves a raising, and an unusual swinging, of the whole right fore leg across and in front of the left fore, necessitating suppleness and relaxation of the right shoulder and knee. Also the horse is required to obey the rider's right leg and to bend his whole spine laterally as he moves in a sidewise direction. To cross his right hind over the left hind calls for engagement of the former far forward under his body. This supples the joints of the hind leg. *The horse, in working at right shoulder-in, is simply over-balanced to the left because of the attitude forced on him by the aids, and consequently is compelled to chase his own center of gravity in order to maintain balance.* When fully trained, a shying horse can be pushed into an object which frightens him by applying shoulder-in to the shoulder away from the object.

Shoulder-in, although here described while moving on a straight line, should be practiced on curves, serpentines and circles. On circles it is simply an exaggerated


SKETCH 5
DIRECTION OF MOVEMENT
LEFT HAND (NORMALLY PASSIVE). May regulate and assist right hand, acting in parallel direction, or as a leading rein.
RIGHT HAND (ACTIVE). Tension to rear and left, toward horse's left hip. (A-B) HAND DOES NOT CROSS NECK
A
RIGHT LEG helps right rein, by driving horse's croup to left.
DIRECTION OF MOVEMENT
B
GENERAL
Rein effect is very powerful. Curves horse's spine, and with right leg, forces horse to move over to left, while advancing.
5th REIN EFFECT
Right Rein of indirect opposition
(in rear of the withers)

mobilization of the haunches. *The horse's curved attitude, and not the particular direction in which he moves, constitutes shoulder-in.* His spine is bent like a bow, with the rider's arm and rein functioning as the bowstring and his inside leg as the archer's hand bending the bow. As it is somewhat difficult to execute straight to the front, this phase is taught last. *Practice on circles first, next on oblique lines and finally straight to the front with the horse oblique to the line of movement.*

The principal points to be observed in right shoulder-in are:

1. Shortening the right rein and using the rein of *"indirect opposition in rear of the withers"* predominately so as to bend the whole spine (to do this the right hand should be above the top of the right shoulder blade, not across the withers);
2. Limiting the bend of the neck with the left rein so that it is uniform with the curve of the backbone;
3. Maintaining impulsion;
4. Endeavoring to keep the neck low, well extended and relaxed and the jaw soft with frequent flexions;
5. Using the right leg just before the horse's right hind starts to cross the left;
6. Stopping the exercise before the horse, through boredom, shows resistance.

As always, the rider's fingers and legs "act" or become "passive" as required: (1) to break any resistance; (2) to maintain the correct position; (3) to follow the prescribed path; (4) to reward obedience. In right shoulder-in at the walk, the fingers relax as the right fore crosses the left fore, since this difficult movement of the right shoulder requires its freedom. They tighten more or less as needed at the instant the left fore steps to the left front, which prevents the horse from moving on a curve to the right. Just at the time the fingers tighten, the rider's right leg, or spur, pushes the right hind across the left hind. Since the right hind moves immediately after the left fore, the action of the rider's leg is timely. At the trot, similar timing of the aids is essential. Remember that the diagonals move *simultaneously.*

Shoulder-in is obviously almost universal in its relaxing and suppling results. *Taught first at the walk and slow trot, as all exercises should be when feasible, it is most efficacious when executed at a free, long-striding trot.* The long strides and impulsion make agility, relaxation, suppleness and good balance imperative. At the gallop the exercise obviously is confined to left shoulder-in when the horse is leading right; right shoulder-in, when leading left. The work has no value unless his position is correct and all resistance is absent. The horse should be utterly relaxed and contentedly obedient.

Where a rider's inexperience makes it advisable, advantage may be taken of a wall or fence to give first lessons in shoulder-in. In so doing, the horse's head is turned toward the wall so that he cannot escape obedi-

ence. Great care, however, must be taken to prevent the crossing of the right fore and right hind *in rear, instead of in front,* of his left fore and left hind, respectively. The wall should be utilized only at the walk for interference of his legs easily may occur. Moreover, the horse is controlled largely by the wall and not the aids. It is, in fact, a very simple exercise to execute for either horse or rider.

Each horse develops, on one side or the other, certain stiffnesses and resultant resistances, or vice versa. If, for example, he stiffens his neck and jaw to the left front, he generally increases the resistance by thrusting his left hip to the same side. The quick remedy is shoulder-in. In this case, left shoulder-in is indicated, but in practice it will be found that some work at right shoulder-in will also be beneficial. This exercise is immeasurably helpful in breaking up all such resistances and a few steps at shoulder-in will reveal to the rider who mounts a strange horse, where the resistances lie—whether in the croup, jaw, shoulder or elsewhere.

It is an excellent idea with an old, well-trained horse at the beginning of each day's work to require a few steps of shoulder-in at the walk shortly after leaving the stables. Complete relaxation of the jaw, neck and spinal column are quickly obtained. This puts the horse in a pleasant mood and he becomes calm, obedient and agreeable in the work to follow.

The above explanation has covered in detail the benefits of *shoulder-in.* Its value is inestimable.

* * *

Thus, we find that the four exercises described require the use of all rein and leg effects by the rider. For the horse, they develop all the objectives of training; i.e., calmness, boldness, suppleness, agility, balance, relaxation, and long low strides through absence of overflexion and distortion.

These exercises are certainly within the capacity of any good horseman directing training, and *they will produce results without fail if followed in detail.*

The First Obligation of an American

I have served in the Army and I know the soldier's point of view both while in the service and in later life. You may take it from me that your service to the nation in its hour of need will not be a waste of your time and effort. In the years that lie ahead you will hold your heads high in the thought that you gave honest and faithful service as soldiers when your country called.

Remember that you are the chosen fighting men of the nation. Others throughout the land are working to supply you with the equipment and the weapons with which you are to act in our defense. But, however earnestly and effectively they may labor, no man who contributes to the common cause only work or money can ever stand on the level of you who are asked to risk life itself for your country and your countrymen.

This nation was founded in the bond of blood and sacrifice by men who pledged their lives, their fortunes, and their sacred honor. They reached their goal. Now you men of a new generation are called upon to preserve the freedoms which they so bravely won. To serve in the common defense, for the general welfare, is the first obligation of an American citizen. You will not falter. You cannot fail.—Henry L. Stimson, *Secretary of War, in his address to the Soldiers of the Army of the United States, August 15, 1941.*

Editorial Comment

MANEUVERS, 1941 — IN GENERAL

UNQUESTIONABLY, the 1941 maneuver period, just concluded was an unequivocal success. It accomplished the purpose for which it was intended. It proved that our expanded army as a whole is *mobile* and rugged. "They can take it." Whoever won or lost the battle is an item of little consequence. The important thing is: *What did we learn?* . . .

Our attention, therefore, is now focused professionally and impersonally on an evaluation of the various maneuver operations and principles involved; to determine the degree of unit combat efficiency and any lessons that can be learned as a result of prolonged field experience.

The press has devoted considerable space in criticism of leadership in the higher echelons of our army, which we believe has been magnified far out of proportion to fact. We should not be deluded. The paramount lesson in our opinion, *observed first hand,* was indicated in several typed pages of comments distributed by Lieutenant General Lesley J. McNair, GHQ, at the critique terminating the first phase of the Second vs. Third Army Maneuvers in Louisiana.

Some of the typical comments that applied *in general to nearly all combat units* were as follows:

"Reconnaissance and security missions continue to be unsatisfactory."

"As in the past, there were too many cases where infantry failed to employ maneuver to overcome resistance."

"It is fundamental that infantry must be trained to melt into the ground and avoid bunching on every occasion when under fire."

"Excessive frontages were so common as to be almost the rule."

"It was so common as to be almost unusual that unit transportation was taken too close to the firing line. In one division, great masses of vehicles were jammed up close to the firing line."

"It was noted that there was a growing tendency in all units for officers and men to take off their equipment at every possible occasion and rush to the nearest soft-drink stand for refreshments—a most unmilitary performance."

". . . failure to maintain contact with neighboring units."

". . . a battalion halted at a destroyed culvert for at least an hour until an engineer officer came up and located a feasible crossing only two hundred yards to the flank."

"Most marches were made during daylight hours when they should have been made under cover of darkness."

". . . a great disregard of actual hostile aerial combat formations encountered."

"Our troops are not sufficiently air conscious. . . ."

"Only in a few cases were artillery weapons well cared for. Some were neglected so as to have rusty bores."

"Police of bivouac areas was generally poor."

And so on . . . and so on . . . and so on . . . !

At the end of the second phase it was indicated that the same criticisms still applied. It would appear obvious, therefore, that the sum and substance of the whole matter is a definite deficiency in *basic training . . . in fundamentals.* The junior officer group and not the senior group is the weakest link today in our military chain. A watch, no matter how perfectly constructed and adjusted, simply cannot function without a *hair spring.*

In our opinion, the great lesson behind the maneuver lessons is that we have superficial leadership in the platoon, company (troop or battery), and battalion (or squadron). We must crawl before we can walk; and for this reason, we should not expect marked improvement in successive large-scale maneuvers until this noted condition in the lower echelons can be rectified. The success accredited the German Armies is due largely to thorough *basic training.*

The root of this evil began to sprout immediately after World War One. Because of curtailed appropriations for field service, and reduction in size of our Regular Army far below that recommended by General Pershing, a large corps of Reserve officers was created, with resultant undue importance given to academic correspondence work, theory, and map problems. Officers were promoted, with insufficient basic training in the practical combat leadership of platoons. They, in turn, now are not training their subordinates thoroughly in fundamentals. Units are road-bound when they should be well grounded tactically in the "pincher" conception of offensive fighting.

Another cumulative evil is, that in the regular establishment, promotion had stagnated to the point that many officers were held in the same grade for a period of sixteen years or more without opportunity for practical experience in exercising command appropriate to age and length of service—for which we are paying the fiddler today.

As we watched the front-line combats in Louisi-

This photograph is presented editorially as a grim warning to all road-bound units that are oblivious to the capabilities of enemy combat aviation.

ana, a general officer, with a noteworthy record of experience in actual warfare, was heard to exclaim, "This is fantastic. These men are not fighting. They seem to have forgotten all they know or have been instructed to do. There is too much *playing the maneuver* instead of assuming actual war conditions." Some may say, "When the bullets begin to fly the troops will take cover," etc. This we doubt, since men under the stress of battle usually do subconsciously what they have been trained to do during peacetime.

The strength of the Army of the United States recently was estimated at 1,588,500 officers and enlisted men. The breakdown is as follows:

OFFICERS

Regular Army	15,000
National Guard	22,000
Reserve Officers	76,000
Total	113,000

It can be noted that there are over six times as many non-Regular officers as Regular officers in our army today; and of the total number of enlisted men, only about half of them are serving under a three-year enlistment.

ENLISTED MEN

Regular Army, 3-year enlistments	505,000
Regular Army Reserve and one-year enlistments	17,500
National Guard in Federal service	248,000
Selective Service Trainees	705,000
Total	1,475,000

In view of the above, it should not come as a surprise that our army is not yet ready in strength, training and equipment for shooting war, and we probably never can be until our people acquire a *Total War perspective.* For example, the personnel strength of the German army is about seven times that of ours. We are fortunate, however, that the situation is not worse than it is! We still are far short of the necessary fighting implements for modern warfare but at least we do have enough with which to TRAIN!

The objective, therefore, is clear. Our material is good. We need only *time* to thoroughly train our lower echelons in fundamentals; to build up the spirit and technique of the offense. We must insist on the rigid adherence to basic training principles and methods. It is a *command* responsibility! We must have many more of the prolonged, large-scale maneuvers to give experience to the higher echelons and toughen and test combat efficiency. In our opinion, unless we immediately do *get back to earth* in our thinking and doing, our future maneuver lessons will continue, in general, to bear a marked resemblance to those of the past.

* * *

Horse Cavalry

The 1941 maneuvers developed little that was startlingly new for our horse cavalry, because of certain influencing circumstances.

In the Louisiana Army Maneuvers the National Guard, 56th Cavalry Brigade and all of our Regular Horse Cavalry regiments were involved excepting two; but unfortunately, the east flank maneuver area was bordered by the Red River which was a major terrain obstacle. The two cavalry divisions and the 56th Cavalry Brigade consequently found themselves often in Texas on the open west flank of the opposing armies resulting in the usual *cavalry vs. cavalry* engagements. It is believed that horse cavalry, however, could also have been used effectively in covering the advance or retirement of their respective armies in these situations.

We already were aware of the relative merit of our cavalry units. We knew that cavalry can *march.* The 1st Cavalry Division while in the Louisiana area covered approximately 900 miles, for the most part the result of administrative marches. Quartermaster regiments were used extensively in shuttling infantry on administrative road marches. A similar use of quartermaster vans in shuttling horse elements on administrative marches would greatly have enhanced cavalry combat efficiency.

Our horse cavalry divisions, by their own means, crossed and recrossed the Sabine River at night. In the words of General McNair: "The 1st Cavalry Division performed a notable feat in crossing the Sabine River on the night of 18th and 19th of September." Our cavalry accomplished normal cavalry missions in a manner prompting numerous commendations from higher commanders and the press (see pages 33-36).

Horse cavalry proved again that it can operate in terrain prohibitive to combat vehicles and can materially assist combat vehicles in their operations where terrain conditions make mechanized and motorized units road-bound. General McNair characterized the Louisiana Maneuvers as the "Battle of the Bridges" because demolished bridges at times paralized our highly mechanized and motorized road-sensitive armies. Similar terrain can be found in numerous areas of the Western Hemisphere, particularly the eastern and northwestern seaboard areas of the United States and in Russia.

It is hoped that, in a subsequent maneuver, all of our horse cavalry will find itself attached to either one army or the other to determine the relative advantage of an army that has horse cavalry over an army that does not.

* * *

Horse-Mechanized Cavalry

In the Louisiana maneuvers our two Regular H & M regiments and three National Guard H & M regiments were involved. While not all of the horse-mechanized regiments were fully equipped with portée vehicles and radios, the basic organization as set up by the Chief of Cavalry proved definitely to be sound.

Horse-mechanized regiments are difficult to control, and as our Chief of Staff, General Marshall, expressed it, "The horse and mechanized elements should be employed as a single unit. Regimental commanders must *think it through.*" It was noted that where the missions were appropriate and when the employment was *thought through* the results obtained were extremely effective; for example, the 4th Cavalry (H-Mecz), attached to the Red Army, received a commendation from the Army Commander, General Ben Lear. In this regard, however, as opposed to this thought, we might cite a test conducted in the same instance. The portée vehicles were withheld from a horse-mechanized regiment for possible use in shuttling infantry. Two of the horse troops, without radio communication, were attached respectively to two infantry divisions for close-in reconnaissance. One division assigned its troop, less a platoon, the mission of establishing a *counterreconnaissance screen* to its flank, covering a *front of twenty miles.* While complimentary to the prowess and capabilities of cavalry, such a mission was not within the realm of possible effective execution. Parenthetically, the troop

in question had had but three feeds of grain in three days and was supplying its men with Type C rations by means of a *jeep*. Whenever a unit is attached to another, tactically, for a prolonged period and not administratively, such a situation frequently exists. It obviously is a better solution to permit a horse-mechanized regiment to operate as a unit under its own commander.

There is no need for confusion as to whether or not the Corps Reconnaissance Regiment lacks the driving power (tanks) to smash through resistance to obtain information. For a line of demarkation, we should remember that the reconnaissance regiment is not intended as a combat regiment, although it does have considerable striking power. It was designed primarily to provide reconnaissance for the Corps with counter-reconnaissance and security as secondary missions. Reconnaissance usually implies dispersion, speed and stealth, whereas combat means a concentration of force. The necessity for *reconnaissance in force* is not habitual. When it is necessary, a force of sufficient strength as a reinforcement should be employed by the Corps. There are tank battalions, motorized infantry, artillery and combat aviation for this purpose that should be provided by the Corps.

Horses and combat vehicles complement each other, particularly in the reduction of road blocks; and, as demonstrated in Louisiana, the horse-mechanized regiments can perform the missions for which they were designed when their contemplated employment has been *thought through*.

(See articles on pages 37 to 46 inclusive.)

Military Courtesy

Courtesy usually is a *reflected attitude* indicative of background, training, and good breeding. That it almost invariably is uniform in character in military organizations suggests that while one usually finds its greatest manifestation at the bottom, the inspiration of military courtesy emanates from the top.

General Pershing, in World War One, requested: "Send me men who can shoot and *salute*." This is easily understandable. When a senior in rank addresses a junior, even *in the field*, he usually is giving orders, or instructions, or is seeking information. The junior (even though it were not a military regulation) who does not immediately assume the *position of attention* is invariably one who is inattentive, unalert and, moreover, he is rude according to ordinary civil standards of courtesy and consideration. We are approaching the subject, however, from the standpoint purely of military value. Psychologically, it is far-reaching.

Those units, personally observed in the Louisiana Maneuvers, that were outstanding in military courtesy; i.e., the Military Police, the Armored Force, the Cavalry and the Engineers, etc., were outfits radiating *esprit de corps*. In units where the earmarks of military courtesy were conspicuously absent it was noteworthy that the men were apathetic and lethargic. They were careless about camouflage precautions and oblivious to aerial attacks. They had a "Tom, Dick, and Harry—come-on-gang" attitude without military decorum. They lacked snap and the spirit of the offense. They were what a World War One veteran would classify as a "rag-time outfit." The enlisted men could not furnish information relative to the locations of the CP's, of designations of adjacent and supporting units, etc. They lacked interest and *military curiosity*!

There is ample historical proof that when an army lets down in military courtesy, there is a proportionate let down in military discipline.

This is a command responsibility and can be aroused by mutually earned professional respect.

Essential Reading

In the splendid October, 1941, issue of The Command and General Staff School, *Military Review*, Fort Leavenworth, Kansas, first place prominence was given to an article captioned, "The Company Commander," by Captain Hans Ellenbeck, German Army. No officer could possibly read this comprehensive and excellent portrayal of the rôle without professionally deriving a great deal from it. In our opinion, it should be regarded as essential reading!

The following is a brief excerpt:

Authority and Discipline

Discipline is the foundation upon which an army is built. A goal of military training should be to inculcate the mere external discipline of the military unit until a point is reached where this discipline is embodied in each individual member of that unit as a fixed mode of living. An officer who in his own person embodies also the subjective type of discipline will be able to attain the goal by making of himself a living example of conduct for his men. His authority will be assured even in the most difficult situations if his sincerity is perfectly obvious, and his men willingly acknowledge him as their leader. It is not really essential for him to be the most intelligent man in his unit, but he must be the most blameless. German soldiers, and especially the ordinary, plain fellows among them, are quite sensitive to the ethical quality of their superiors. They will be only too glad to follow a leader they can look up to and for whom they have genuine respect. Conditions in the field make it necessary for an officer to spend day and night under the scrutiny of his men; and that calls for a high degree of self-discipline, both on and off duty. It implies first of all cheerful and conscientious performance of all necessary tasks; but aside from that the situation also requires cheerful willingness to be content with little in the way of food or lodging, a habit of keeping sober at all times, self-control in matters of sex, avoidance of profligate conversation, as well as a certain steady and calm self-assurance of manner. . . .

2d Cavalry Division Organizes 11 New Units

Organization of 11 control and service units of the 2d Cavalry Division without any increase in the present Division strength of approximately 8,200 officers and men, has been announced by the War Department.

The new Cavalry units authorized were already formed provisionally with about half of their full strength. They participated in Second Army maneuvers in Louisiana under this provisional organization at reduced strength, with soldiers taken from other squadrons of the Division to form the skeleton units. The activated units will maintain this reduced strength.

Elements of the 2d Cavalry Division formed are:

Troop A (Reconnaissance) 92d Cavalry Reconnaissance Squadron
2d Signal Troop
Headquarters and Headquarters and Service Troop, 9th Engineer Squadron
Headquarters and Headquarters Battery, 2d Cavalry Division Artillery
Headquarters and Headquarters Troop, 17th Quartermaster Squadron
Troop B (Truck) 17th Quartermaster Squadron
Division Surgeon's Office, 2d Cavalry Division
Headquarters and Headquarters Detachment, 2d Medical Squadron
Troop A (Collecting), 2d Medical Squadron
Clearing Troop, 2d Medical Squadron
Veterinary Troop, 2d Medical Squadron

* * *

Major General John Millikin commands the 2d Cavalry Division at Camp Funston, near Fort Riley, Kansas; one of the two such divisions in the Army.

Housewife

For that stitch in time, the Quartermaster Corps will furnish each Army squad with an Army "housewife." The "housewife" is a small packet containing sewing and darning needles, assorted buttons, pins, approximately 100 strands of thread, and other articles necessary for emergency clothing repairs. A special braiding technique keeps the thread together until the last strand is used. Thread is provided in two shades of olive drab and white.

Lubrication Guides

In the November-December, 1941, issue of *Army Ordnance* there appear two War Department Lubrication Guides—Scout Car M 3A1, and Carrier Mortar 81-mm. half track M4.

These excellent charts with the accompanying notes doubtless will be of great value to those units having such equipment. (Also see page 61, our July-August 1941 issue.)

Spark-Proof Shoes

Spark-proof shoes are among the latest types of footwear being tested by the Army. The new shoes are designed for soldiers who dispense gasoline and other inflammable materials, particularly in the Armored Force, where a spark may be disastrous.

Vulcanized fiber, instead of metal, is being used for washers in the heels of these new shoes, and the nails are made from a non-sparking metal. Shoes made according to this new design are being given a thorough workout by soldiers of a gasoline and oil battalion in the Armored Force. If they prove satisfactory, all soldiers who perform duties where a spark may be dangerous, will be provided with these spark-proof shoes.

Portée

Delivery of motor vehicle trailers will make it possible for Cavalry units to travel farther and faster and still have mounts for specialized work upon reaching their destination.

The trailers are of two types—a small two-horse van and a large semi-trailer combination animal and cargo carrier sufficiently large to hold eight horses and their required equipment.

Plans of the Quartermaster Corps call for procurement of approximately 1,000 of the larger carriers. They soon will be delivered for use by the Cavalry, but will be maintained by the Quartermaster Corps.

Notice

For several years it has been the practice of The CAVALRY JOURNAL to publish, in the November-December issue, a complete roster of cavalry officers. This year, however, due to certain restriction and to the greatly increased number, including National Guard and Reserve Officers on active duty, such a roster cannot be made available. Reference can be made to "War Department Changes," which have appeared regularly in The CAVALRY JOURNAL during 1941.

Annual Meeting

The Annual Meeting of the United States Cavalry Association will be held at the Army and Navy Club, Washington, D. C., at 8:00 PM, Monday, January 12, 1942.

Formal notification, together with proxy cards will be mailed to active members of the association stationed within the continental limits of the United States.

In order to establish a quorum at the annual meeting, all members who will be unable to be present are requested to return the proxy cards promptly to the Secretary, United States Cavalry Association, 1624 H Street, NW., Washington, D. C.

Editor's Mail

Smoke

EDITOR, THE CAVALRY JOURNAL:

I wish to thank you very much for your thoughtfulness in sending the article which appeared in the September-October, 1941, issue of The CAVALRY JOURNAL, written by Major Miller and titled "Smoke for Protection."

While Major Miller's article is very interesting and depicts a method by which smoke can be generated from tanks under field conditions, this method of smoke generation and this type of smoke has never been acceptable to the Armored Force. In 1924, the Chemical Warfare Service developed a very neat and efficient apparatus for installation on the outside of a tank using FM as a smoke liquid. At that time tanks were under the jurisdiction of the Infantry and after many tests the Infantry decided that this type of smoke was not satisfactory for use with tanks due to its corrosive action. Later the Armored Force Board set up specific requirements for a smoke generator which prohibited the use of FM, FS and other corrosive gases. Our effort, therefore, for the past two years on this type of apparatus, has been devoted to producing a smoke in the manner outlined in Major Miller's article, but by means and methods which eliminates the use of the corrosive type of smoke. You might be interested to know that some one hundred and forty apparatuses designed as outlined above have been under field service tests during the Louisiana maneuvers and the results have been very satisfying.

I consider that the tactical use of smoke as outlined in Major Miller's article is correct and that his article is very interesting from that viewpoint.

WILLIAM N. PORTER,
Major General,
Chief of the Chemical Warfare Service.

Washington, D. C.

Cans

EDITOR, THE CAVALRY JOURNAL:

In reply to your letter of October 7, 1941, inclosing a letter which appeared in the September-October issue of The CAVALRY JOURNAL, you are advised that when the Type C ration was developed, the Quartermaster Corps considered using the rectangular can because of the resultant space saved. Investigations proved, however, that it would result in considerable additional expense if the flat can was adopted. Although used for packaging certain meat products, this type of can is not generally produced by can manufacturers. To manufacture the can in quantities would necessitate expensive revision of can dies.

Packaging difficulties of the B Unit of the Type C ration were discovered in experiments with the flat can.

Because of these reasons, the Quartermaster Corps has adopted the standard round which has proven very successful.

For the Quartermaster General:

R. A. OSMUN,
Colonel, Q.M.C.,
Assistant.

Washington, D. C.

Cavalry and Artillery Saddles

EDITOR, THE CAVALRY JOURNAL:

Replying to your letter of the 6th: There is no difference between the basic McClellan Saddle for either the Cavalry or the Artillery. There are, however, several differences in the fittings.

Considering the Cavalry McClellan as standard, this saddle is equipped with the new skirts and girths, and with three coat straps, pommel 33" and three coat straps, cantle 45".

For the Artillery: Individual Mount. The McClellan saddle is identical with that issued the Cavalry, with the exception of the coat straps. This saddle has—

Three coat straps, pommel 33"
One coat strap, cantle 45"
and two of 60 inches.

For the Artillery: for use with artillery harness: All McClellans are equipped with D rings on top of pommels and on top-rear of cantles. These D's are used for holding up harness parts.

Further, all "near" saddles are equipped with the new skirts and girths, but the "off" saddles are still of the old type with quarter straps and cinches.

To simplify issue we tried to have these "off" saddles modified but both the Chief of Field Artillery and the Office of the Quartermaster General did not deem it economical to do so.

ALBERT E. PHILLIPS,
Colonel, Q.M. Corps,
Assistant.

Jeffersonville, Ind.

The Guerrilla

EDITOR, THE CAVALRY JOURNAL:

I had to take time out to congratulate you on the excellent series of articles on Guerrilla Warfare. Captain Haig's article was particularly enlightening. I would like to see him write a much larger article on the subject.

If Norway is to be reconquered without a great cost in Allied lives the groundwork must be laid by guerrilla warfare. The country possesses most of the prerequisites for this type of warfare.

Yours truly,

SAM SKURNICK.

48 Lippincott Ave.,
Long Branch, N. J.

Armored Force, Please Note

EDITOR, THE CAVALRY JOURNAL:

The Armored force is packed with Cavalry officers. I'd like to see a *bit* more on Armored Force tactics.

WELLS FAY,
Capt., Cav.

Camp Polk, La.

* * *

The Guidon

EDITOR, THE CAVALRY JOURNAL:

It seems odd to be addressing a letter to the Editor—after being on the receiving end of so many. But, as an old Cavalryman, I was especially interested in the suggestion that would change the colors of the guidon.

I recall that I was surprised when I first saw the red and white of the Troop guidon. I had expected it to be yellow, I suppose. But that was many years ago, and since then I have lost the feeling that it should be anything else.

In most things, I feel that the Cavalry has leaned so heavily on the outward manifestations of tradition as to become, to many, a standard example of reaction, and, in fact, to imperil its own existence. I refer particularly to the lack of foresight and imagination in the last War that was unable to find tactics or weapons impressive enough to hold the Arm together and allowed itself to plunder almost out of existence by more progressive Arms. Although armored cars and tanks were widely used and ideally adopted to the philosophy of Cavalry warfare, it apparently never occurred to any of us that here lay our destiny. We thought too much of the horse as a fetish and not enough as a means of conveyance, mercifully becoming less import to war.

And even today, an Armored Corps is to be found as a separate Arm, when it should naturally become the basis of the modern Cavalry service. Properly used, Armored divisions are simply today's materialization of yesterday's cavalry.

Yet I cannot help remembering the Banquet Room in the Armory where the walls are decorated with framed Guidons that go far back in our nation's history. I would feel, somehow, that in making such a change, we would be sacrificing a fine tradition in a rather futile, desperate effort to make some concession to change. Surely to select new colors for our guidon cannot make any great improvement in our position in contemporary warfare. But to many a veteran of the old Cavalry they can bring a feeling of needless bewilderment and isolation. Here, in the small things, the emblems and banner, tradition can be important.

Let us modernize our thinking, our imagination, our weapons and our organization. Let us keep the old guidons intact, the colors that led many an intrepid, hell-for-leather charge in the past, to be an inspiration for the same spirit in the rolling wheels of the Cavalry of today.

Very truly yours,

J. FRANKLIN WHITMAN, JR.,
Associate Editor, *Our Army*.

11 Park Place,
New York City.

* * *

EDITOR, THE CAVALRY JOURNAL:

Dear Sir:

The question I am about to ask has been discussed many times, but the answer is still unknown by many of us.

Guidons! The artillery have red; the infantry blue; and why does the cavalry have red and white?

I don't mean to stick my neck out too far, as perhaps I should know, but I would like to have an authentic answer for this question when queried by other branches as well as fellow cavalrymen.

HARRY W. POST,
2d Lt., 15th Cavalry (H-Mecz).

Ft. Lewis, Washington.

Editor's Note: A description of the cavalry guidon first appears in army regulations 1835 as Red and White.

In the 1863 reprint of the 1861 regulations a change (no date) was made directing all guidons be made like the *US flag with stars and stripes.*

* * *

"Regulations of the Army of the United States and General Orders in Force. Volume I, 1881, page 284, par. 2792.

GUIDONS FOR CAVALRY

"To be made of silk, with stars and stripes like the national flag; made swallow-tailed. Stars to be gilt, one and one-eighth inches in diameter from point to point.

"The guidon to measure from the lance three feet five inches to the end, and fifteen inches to the fork of swallow tail, and two feet three inches on the lance.

"The fork of the swallow tail to be equidistant from the top and bottom of guidon.

"The letter of the company to be embroidered in yellow silk, or painted on one of the white bars of the flag.

"The lance to be one and one-fourth inches in diameter, and nine feet long, including spear and ferrule.

"To have a water-proof case or cover to protect the guidon when furled."

* * *

A change was made back to the red and white guidon by War Department General Order 65, June 20, 1890.

The quartermaster specification book of 1893 gives the date of the specification March 19, 1890, 3 months before the general order.

Cavalry Commendations

What Others Say - -

About the 1st Cavalry Division

Major General Innis P. Swift, Commanding

The following letter, Headquarters V Army Corps, August 29, 1941, is published for the information of all personnel:

"1. I desire to express to you, the officers and men of your command (1st Cavalry Division), my deep appreciation for the superior manner in which all missions assigned you were accomplished during the period you were under my command.

"2. The training of all echelons of the V Army Corps greatly benefitted from the cheerful manner in which you undertook all tasks, and the thorough coöperation extended by you to the Staff and Units of this Corps.

(Signed) E. L. Daley,
Major General, U.S.A.
Commanding."

* * *

RADIOGRAM

"Commanding General First Cavalry Division.

"I desire that the following message be brought to the attention of every individual under your command: 'Upon termination of the maneuver today, I extend to the Third Army, the 3d ATF, the 1st Tank Group, and other attached troops, my sincere appreciation of their fine exhibition of physical stamina, aggressiveness, and *esprit de corps*. I am proud of the performance of officers and men, and congratulate them for duty well done.' Krueger."

* * *

COMMENDATIONS RECEIVED BY THE 1st CAVALRY DIVISION AT THE SECOND AND THIRD ARMY CRITIQUE

"The movement of the Cavalry Division across the Sabine River on the night of 18-19 was a beautifully done piece of work."

Signed: Lt. Gen. Krueger.

* * *

"The 1st Cavalry Division performed a notable feat in crossing the Sabine River on night of 18th and 19th of September."

Signed: L. J. McNair,
Lt. Gen., G.H.Q.

* * *

"HEADQUARTERS I ARMORED CORPS

Office of the Commanding General
Camp Polk, Louisiana

September 30, 1941.

SUBJECT: Appreciation of coöperation of 1st Cavalry Division in second GHQ exercise.

TO : Commanding General, 1st Cavalry Division.
(THROUGH: Commanding General, Third Army)

1. I wish to express to you and all the personnel of your fine division my appreciation and that of the entire personnel of the I Armored Corps for the splendid coöperation and assistance received in forcing a crossing of the SABINE RIVER at JOAQUIN on September 28, 1941. The successful crossing of this river and the establishment of an effective bridgehead could not have been accomplished in the prompt and efficient manner that pertained, without your bridge equipment and without the most remarkably efficient crossing of your horse elements over a foot bridge.

* * *

3. I regret that the exercise did not continue through another day because I believe that your division could have demonstrated most conclusively that it could assist Armored units in their movements forward over difficult terrain and could follow up promptly and effectively the attack of these units after it had been launched.

C. L. Scott,
Maj. Gen., Commanding."

* * *

"Express my thanks and congratulations to General Swift for that river crossing. He certainly pulled us out of a hole."

Major General Greely.

* * *

The following comments were made by members of the Second Division Staff:

"That crossing was in the best tradition of Lee and Custer."

"When the Cavalry crossed the river, they relieved the pressure on us and the enemy found himself in an impossible position."

"The Cavalry Division's crossing the river was the only thing that saved our neck."

* * *

The following radiogram, Hq. Third Army, 28 Sept., 1941, to CG 1st Cav. Div.:

a. "To all troops First Cav. Div., it is with pleasure that I repeat the following telegram from Gen. Marshall, Chief of Staff, United States Army: 'Please see to it that the following message reaches each division, separate brig., or regt., air groups, and principal supply echelons and staffs within six hours after termination of final maneuver phase: "To all commanders and their

officers and noncommissioned officers and to the men in the ranks. The maneuvers just completed have been a great success on the ground, in the air, and for the supply and maintenance services. The zeal and energy, the endurance and the spirit of the troops have been a marvel of excellence. There is much more to learn but the mistakes of the past two weeks will be corrected, the deficiencies in material will be made good. The armored units and the air squadrons are now a part of the military team supported by dive bombers of the navy and marine corps. The supply services have proved that they know their business. This new citizen army is rapidly on its way to becoming a powerful machine with all its parts in close coöperation. To all of you and especially to those older men soon to be released from active service my thanks and those of the entire War Department for having done a grand job. GENERAL MARSHALL." ' (signed) KRUEGER."

b. "Upon successful completion of the most arduous maneuver task given our army I desire to express to every member of this command my deepest appreciation and thanks. Well done, Third Army. (signed) KRUEGER."

* * *

"CHAMBER OF COMMERCE
Bryan, Texas

October 6, 1941

General I. P. Swift
Fort Bliss, Texas.

Dear General Swift:

I am writing to say, on behalf of the citizens of Bryan and Brazos County, that we greatly appreciate the privilege we recently had of having your command with us for one night. Our only regret is that we could not do more in the way of entertaining your men and making them more comfortable in their surroundings.

I would like to say that our citizens are unanimous in their praise for the fine conduct of your men while here. I have not heard a single derogatory remark but on the contrary have heard praise of the men and officers on every side.

Again assuring you that it was a great pleasure to have you and your command with us and hoping that we shall have the pleasure of having you with us again, should the occasion ever arise, and with regards and all good wishes to your staff, I am

Yours sincerely,
(signed) D. L. WILSON, Secretary-Manager."

* * *

About the 2d Cavalry Division

Telegram from Second Army Commander

Congratulations on your *fine* work in the maneuvers. You and the Fourth Cavalry did a swell job.

BEN LEAR,
Lt. Gen., U.S.A.,
Commanding.

HEADQUARTERS I ARMORED CORPS
Office of the Commanding General
Pleasant Hill, La.

Sept. 21, 1941.

SUBJECT: Commendation.
TO : Major General John Millikin, Commanding 2d Cavalry Division.

1. I wish to express to you, your officers and enlisted men, my appreciation and that of the entire personnel of the I Armored Corps, for the most effective coöperation rendered to us by your division in the first G.H.Q. exercise.

2. You and your division not only handled all missions assigned to it exceedingly well, but also took care of many pressing situations that could not be foreseen.

3. It is hard to single out any particular unit in a command so good as yours for special commendation. However, I do think the performance of your 4th Brigade (Colored) in the action which occurred at ZWOLLE on the afternoon of Sept. 19, 1941, deserves special mention. This place was the focal point of attack of various hostile elements including cavalry, motorized infantry, and air. The enthusiasm, the interest, and the actions of your colored brigade was up to the standard expected of our best cavalry traditions.

4. Good luck and more power to you.

C. L. SCOTT,
Maj. Gen., U.S.A.
Commanding.

* * *

I wish to express my gratitude to all officers and enlisted men of the Third Cavalry Brigade Combat Team for services rendered during the recent maneuvers. The successful execution of all tactical missions assigned you was made possible by the highest degree of coöperation and distinguished by a cheerful readiness to accept the hardships imposed and by an unusually high spirit and pride in your organization. Great credit is due to all officers and enlisted men of both the combat and service elements.

TERRY ALLEN,
Brig. Gen., U.S.A.,
Commanding, 3d Cav. Brig.

* * *

About the 113th Cavalry (HM)

HEADQUARTERS VIII ARMY CORPS
Office of the Corps Commander
Brownwood, Texas

October 30, 1941.

SUBJECT: Commendation.
TO : Colonel Maxwell A. O'Brien, 113th Cavalry (HM), Camp Bowie, Texas.

1. I take great pleasure in commending you, and through you, all ranks of your splendid regiment, for their superior performance of duty during the recent grand maneuvers in Louisiana.

2. The numerous missions assigned to your regiment were habitually executed with a high degree of efficiency and promptness. In many situations patrols displayed great ingenuity in accomplishing these missions. The prompt and accurate information which came to my Headquarters from your regiment was of great assistance in planning and directing the operations of the VIII Army Corps.

3. The highly efficient manner in which the 113th Cavalry performed its duties is worthy of emulation by all units of this command.

4. This letter will be read to all troops of your regiment.

GEO. V. STRONG,
Major General, U.S. Army,
Commanding

* * *

The Press

1. The following editorial from the September 26th issue of the *Evening Star,* Washington, D. C., is quoted:

"After five days of intensive fighting in the Louisiana war games, it seems possible to draw some rather clear-cut lessons from the results achieved.

"One is that the function of horse cavalry in modern warfare—at least on swampy, wooded terrain such as that over which the maneuvers are being staged—is by no means exhausted. Another is that in territory where tanks cannot maneuver extensively except by keeping to established roads, the engineers and even the infantry must play vital rôles in successful defense operations.

"Some news dispatches emanating from the headquarters of Lieutenant General Ben Lear's Second, or "Red" Army, give the distinct impression that the utter failure of Thursday's large-scale attack by the armored units of the Red Army—the first of the maneuvers—was attributable to the aerial superiority of the Blues. That is decidedly erroneous.

"The Blues enjoyed superiority in the air, it is true, although their margin was not great—400 planes to 300 for the Reds. And this advantage was exploited to the fullest extent, with dive bombers blasting mechanized concentrations and harassing communication lines while observation planes kept Blue headquarters well informed of the enemy's movement. But, in final analysis, the planes neither stopped the attack nor drove back the attackers. That was the work of the infantry, the engineers, and the cavalry.

"General Lear had made careful preparations for his attack, and it was well executed. But it soon bogged down in the face of bridges blown out by Blue engineers, 37 and 75 millimeter guns rushed to strategic positions behind the Blue lines by antitank units to kill off tanks that succeeded in breaking through, and by the efficient work of riflemen and machine gunners who melted away into the woods to let the tanks go roaring by and then reformed their lines in time to prevent any Red infantry units from jamming through the breach made by the armored vehicles.

"It was at this stage of the battle that the Blues brought the First Cavalry Division, which had been stationed far out on the left flank, into play. This outfit, preponderantly horse-mounted and horse-drawn, proved capable of crossing terrain that had defied the best efforts of the tanks, and succeeded in getting in behind the Red lines and capturing most of the reserves of gasoline for the attacking armored units. This forced a Red withdrawal to the northeast to new sources of gasoline, and this withdrawal was quickly turned into a desperate but unsuccessful effort to stem a well coördinated drive by a Blue infantry division upon the important town of Natchitoches, headquarters of General Lear, who was compelled to make a hasty withdrawal to avoid capture.

"This initial Blue success by no means detracts from the great present-day importance of planes and tanks. The latter, had they been operating under more favorable geographical conditions, undoubtedly would have given a much better account of themselves. But the triumph for the Blues does serve to emphasize the importance of not overlooking the older service arms in planning for the future, and it is a safe assumption that this fact has not been lost upon the Army's high command."

* * *

The following editorial from the September 27th issue of the *World,* Tulsa, Oklahoma, is quoted:

THE CAVALRY

"It is often asserted that the cavalry tradition of the United States dies hard. The truth is that cavalry is not a tradition and it isn't going to die.

"Out of the big practice 'war' in Arkansas, Louisiana and Texas comes the significant note that the cavalry division was found indispensable. In that swampy country, with many streams and bayous, horses went where tanks could not go; the cavalrymen opened the way for the light motored divisions and the infantry in places where heavy equipment would stall. Cavalry is still relatively fast, despite the overshadowing airplanes and the extensive motorized equipment on the ground. There is almost a full cavalry division in action in the mock warfare, where the practice is of the hardest and where the conditions of real warfare are simulated to a remarkable degree. Cavalry serves also as a capable sort of light artillery.

"This development is important in face of the fact that many army officers have been quoted as saying that 'horse cavalry' is obsolete, and that most civilians have abandoned horses. It has become apparent, through war, work, and sports and for sentimental reasons, that the virile American is not going to be fully separated from his horse. They together conquered the terrain

of most of the United States—in peace and war—and are going to keep it."

* * *

In the September 29th issue of *News Week,* the first phase of the maneuvers of the Second Army versus the Third Army is discussed. In this article, it is indicated that after a strong advance by the Blue Third Army, the Red Second Army counterattacked. The manner in which the Blue Third Army stopped this counterattack is described approximately, as follows:

"To meet the Red counterattack, the Blue Third Army threw in all it had—tanks, tank destroyers, dive bombers—the works. But what really stopped the Red Armored force was, ironically, a Blue horse Cavalry operation. Miles away from the battle of Peason Ridge (across the Sabine River) a horse Cavalry foray that would have delighted a Jeb Stuart or a Phil Sheridan, captured the Red gasoline supply, bogging down the mechanized drive."

In commenting on the employment of horse Cavalry, the following is quoted from the same article:

"For many months to come the Army will study this and other results of the exercises, including the brilliant work done by the horse cavalry in grabbing the panzer forces' fuel—a stroke that must have warmed the heart of many a red-necked cavalryman who has been told over and over again that armored force has made the horse obsolete. The cavalry's feat, plus the more effective use of air power, were the outstanding actions leading up to the Blue victory."

* * *

In the September 29th issue of *Time Magazine,* "Final blow came as the Commanding General, Third Army, threw the 1st Cavalry Division in. This division swept out of East Texas with 17,500 men, on horse, motorcycle, and scout car, slashed east and north around the flank of the Red Second Army in a night ride. By that time the Commanding General of the Red Second Army knew the worst. Driven back from two headquarters, he had lost most of his rear and supplies to the 1st Cavalry Division."

* * *

Christian Science Monitor, Boston, October 2, 1941: "The First Cavalry Division forded the Sabine River with its motorized equipment at night. Where water was too deep cables were carried to trees on the far bank and the trucks and scout cars and 'jeeps' literally pulled themselves across on their winches. The feat enabled the Blue Army to catch the Reds by surprise, capture the gasoline supplies of the armored division and put them out of action."

* * *

EDITOR'S NOTE: It is regretted that the additional commendatory news items in this regard are too numerous and voluminous to publish in this limited issue.

NO IT ISN'T A STAMPEDE. JUST THE FIRST CAVALRY DIVISION CROSSING THE SABINE!
THAT'S NOT A TICK, IT'S A TURTLE!
BN8 FROM DAG!
WARFARE CALLING COLONEL MADDOCKS!
ANYBODY SEEN MAJOR DOYLE?
EASY NOW EASY!
WILL SOMEONE FETCH ME A TOWEL PLEASE
I BELIEVE YOU'LL FIND COLONEL BOYE OVER THERE DRYING OUT HIS SOCKS
SORRY, COLONEL BLOUNT HAS GONE TO JASPER
TSK TSK MY TAIL IS WET AND I CAN'T DO A THING WITH IT!
HEAVE! HO!
KINDLY RELEASE MY TAIL PLEASE
WHEN BETTER BRIDGES ARE BUILT MAJOR DUNN WILL BUILD THEM!
WASHINGTON CROSSED THE DELAWARE DIDN'T HE?
WHAT IS THE ENEMY SUBMARINE SITUATION, COLONEL BATCHELOR?
AND I PASSED UP THE NAVY TO JOIN THE ARMY!
EIGHT GASOLINE DRUMS MAKE A FINE RAFT FOR THE BANTAMS
GLUB!
REMINDS ME OF THE OLE SWIMMING HOLE
WONDER HOW THIS THING WOULD WORK AS A BATHTUB!
JUST WRAP ME IN A TARP AND CALL ME THE QUEEN MARY
EASY NOW, THIS THING AIN'T EXPENDABLE!
I KNEW THESE WATER WINGS WOULD COME IN HANDY
I HATE TO TAKE THAT TWENTY FIVE BUCKS FROM COLONEL SWING
US

113TH CAVALRY (H-MECZ) *In Louisiana Maneuvers*

By Colonel Maxwell A. O'Brien, Commanding

THE confidence which the officers and men of the 113th Cavalry had in the successful performance of the horse and mechanized reconnaissance regiment proved to be thoroughly justified by our experience in the Louisiana maneuvers. We have always been enthusiastic about the organization and were convinced that the combination of the horse and mechanized would prove successful. It is true that a large number of changes in both the Table of Basic Allowances and the Table of Organization have been recommended as a result of our experience in the maneuvers but we are well satisfied that the basic plan for the organization is sound.

During the maneuvers we seized every opportunity to experiment with the team of horse and mechanized elements. To this team we added as the situation required, sections of the Antitank and Pioneer and Demolition platoons. When we were so fortunate as to have a company of engineers attached to the regiment, we also added detachments from this company to the team. Had the motorcycle troop been equipped with either bantams or tricycles, we would also have used detachments from this troop with the team at various times. Unfortunately, our motorcycle troop had so little motor equipment that we could not avail ourselves of its full capabilities. We are sure that it has a very important place in this team and upon several occasions we greatly deplored the fact that a detachment from this troop could not be used. In using reconnaissance teams of the horse-mechanized and other attachments, we found that the horse in portée could keep within easy supporting distance of the mechanized unit to which attached. When the situation warranted, the horses were speedily detrucked and succeeded in reducing road blocks and forcing the withdrawal of delaying detachments by unexpected flank attacks. We found that when the time came to infiltrate through the enemy lines the horse, detrucked, could by its own means succeed as well or better than the mechanized troops using it's capabilities. Close contact was always maintained between the horse and mechanized units of the team and assembly points designated both to the rear and to the front and behind the enemy lines for each element so that each knew at all times where the other was operating and might be reached at designated intervals. The horse elements were especially successful in night operations, flooded areas, or marshes and swamps. They succeeded in capturing a large number of valuable records, maps, regimental and corps SOI's and SOP's, and succeeded in taking a large number of prisoners including a number of field officers and regimental commanders. The horse troops were able to maintain contact with the enemy during the hours when the mechanized troops were compelled to halt to await daylight and for the purpose of servicing equipment. As all organizations generally moved during the night, the horse troops were able to report enemy movements and the establishment of new lines almost as soon as this occurred. Even more information could have been obtained from the horse elements had their radio net been larger and better. We found that the SCR-203 sets were extremely difficult to keep in operation, especially when carried in pack and that their range was not sufficient in general, to maintain contact with the Regimental Command Post, and many times with the Squadron Command Post. Moving by portée permitted the employment of the horse troops many miles from the Regimental Command Post and at times from ten to fifteen miles from the Squadron Command Post. These distances require practically the same radio equipment for proper communication within the Squadron and to the Regimental Command Post as that used in the mechanized Squadron. Our conclusion is that the horse squadron should be equipped with many more and better radios.

We believe the horse squadron should have SCR-245 sets in the Squadron Headquarters and the troops. These sets should be constructed to ride either in horse pack or bantams. On several occasions the horse squadron was unable to contact the Regimental Command Post with the SCR-203 sets and the mechanized squadron was compelled to relay such messages through its troops and squadron. To relay messages in this manner requires very close liaison between the units of the horse and mechanized squadron and causes some delay. The necessity for this relay would be done away with if the larger sets were provided for the horse troops. We do not wish to be understood as going on record that the SCR-245 sets are adequate in the mechanized squadron, for they are not. The troops of the mechanized squadron should be equipped with SCR-193 sets and the commander's group cars in Regimental Headquarters should have these sets equipped with both ground and whip aerials. The ground aerial could be speedily set up when greater range is necessary. At times we were so far forward that even with a relay car it was very diffi-

cult to contact Corps Advance Message Center, and contact could not have been made at all without the relay and had not the Corps Message Center been well forward. Our shortage in radio equipment during the maneuvers was critical and necessitated that all sets including the fragile SCR-203 be kept in operation at all times. We had no replacements for the SCR-203 and we did not have sufficient of the SCR-245 sets to even provide one for each of the platoons in the reconnaissance troops. Our communications personnel, did a remarkable job to keep all of this equipment operating twenty-four hours a day throughout the maneuvers. The volume of messages that they handled is indicated by the fact that during the first phase of the Army vs Army exercises, our regimental radio net cleared over 1,600 messages.

We are now satisfied with the size of the tractor trailer and believe it is better than a larger number of small vehicles. We are convinced, however, that the tractor to the portée combination should be more powerful. The present tractor does not have sufficient power to maintain a uniform moderate rate of speed over ordinary hilly ground. It would be very much better if a uniform rate of speed of from twenty-five to thirty miles per hour over all ordinary terrain could be maintained. The present rate on marches of average distances is from twenty to twenty-five miles per hour. Even though the tractors are now underpowered, we were pleasantly surprised by the comparatively easy manner they covered the ground and when used in a team, kept within supporting distance of the mechanized units. They were much easier to camouflage than we had anticipated and were especially difficult to detect when parked close to buildings. It was anticipated that a large number of bridges would be encountered over which the portées could not be moved. Actually we found but few bridges that it was believed might be unsafe for the portées, and at such times the Pioneer and Demolition section which we attached to the portée platoon was prepared to reinforce the bridge or construct a bypass which enabled the portées to proceed with but slight delay. Protection of the portées was always a problem. The three scout cars now assigned to it in the Service Troop are insufficient protection when the squadron acted independently of the mechanized troops or when it accompanied those troops. The portées were generally moved by troop which allowed but one scout car for each section of portées. At least ten additional scout cars should be added to the portée platoon to provide adequate protection for each section, and avoid the necessity of attaching scout cars to the platoon from the mechanized troops. The mechanized troops require all scout cars to cover their zone of reconnaissance, and to detach any cars from the troop seriously impairs its capabilities. When additional scout cars were not attached to the portée platoon for protection it was found necessary to halt the platoon for detrucking a considerable distance short of the point where the portées would otherwise have been able to proceed.

Many times the horse troops were in excellent position to use smoke, antitank mines and demolitions but owing to the lack of a suitable pack were unable to do so. The horse and mechanized team worked particularly well in delaying actions and during one phase of the maneuvers succeeded in delaying a division for approximately one whole day. With the addition of smoke, anti-tank mines, and demolition equipment, the delay could have been made even longer.

The need for a larger Pioneer and Demolition unit was repeatedly brought to our attention. Both the reconnaissance troops and the horse troops should have sections from this platoon attached. The platoon as now organized was not nearly large enough to meet all demands made upon it. At least another platoon should be added, equipped with collapsible boats, and light bridge building material.

The Antitank Platoon is much too small and if a weapons troop is not made a part of the horse and mechanized regiment, at least twenty-four more 37-mm. guns should be added to the armament of the regiment. With the increasing use of tanks and armored vehicle, the six guns in the antitank platoon cannot cover the numerous avenues of approach for them. While we did not have experience with them, we believe the 37-mm. antitank gun mounted on the bantam would be a very good arm for this regiment.

We used the solo motorcycles for all purposes and found that in reconnaissance work they were entirely unsuitable. A few motorcycles for messengers and traffic control are sufficient. Bantams should replace not only the solo motorcycle but the tricycle except the few needed for traffic control and messengers. The substitution of bantams would also increase the fire power of the regiment and permit its speedy employment wherever needed.

The mechanized squadron lived up to all of our expectations, even though it suffered from a critical shortage of radio equipment. It was invariably first to contact the enemy and succeeded not only in getting its own information back to the Regimental Command Post but on many occassions relayed information from the horse troops that were beyond the range of the SCR-203 sets. The scout cars performed very well mechanically, and displayed unexpected ability to overcome mud and water. We believe, however, that they would have even better cross country roadability if mounted on the standard six by six chasis. They should also have higher sides, be equipped with a winch, a bracket for a spare tire, and with brackets for carrying twenty gallons of additional gasoline.

The scout cars being somewhat unwieldly are hard to extricate on narrow roads when necessary to speedily withdraw from a tight situation. If the present organization of the reconnaissance troops is continued, these cars should have dual steering and controls, one front and one rear, thus permitting quick getaway on narrow

roads or when otherwise confined. However, we believe the reconnaissance troops would function better if reorganized with platoons composed of one scout car and six bantams. This would give the platoon much greater "peak and sneak" ability with less chance for serious loss. The use of bantams should also relieve the serious gasoline supply problem with which we were confronted during the maneuvers. Our regiment at that time used 4,000 gallons of gasoline per day. Replenishment of the gasoline supply by the method of exchanging empty ten gallon cans for full ones, we believe, is unsatisfactory. If three 2,500 gallon tanks, tractor drawn, are included in the equipment of the regiment, the gasoline supply problem would be much less acute. The tractor drawn tanks could be moved forward to a distributing point where the gasoline supply could be quickly replenished. There are many other points in favor of the tractor drawn gasoline tanks over the can system.

Another serious obstacle to the uninterrupted performance of both squadrons was the difficulty in supplying the personnel with hot food. At the beginning of the maneuvers there were days when the troops existed upon the "C" ration or other canned foods. This is not satisfactory and as we were unable to obtain Marmite cans, we purchased insulated canvas ice cream can packers. In each one of these packers we carried three covered pails, one for hot coffee, and the other two for the meat, vegetables, bread and butter. These packers kept the food hot for about five hours. While we experienced but little difficulty in getting rations to the troops, difficulty was experienced in moving the hot food to the platoon or section, as this had to be done by the use of scout cars sent back for that purpose. Marmite cans should be a part of this regiment's equipment and transported in modified bantams. The marimite can-bantam combination should relieve the difficulty experienced in getting hot food forward to the platoons and sections.

The supply of ammunition could not be properly tested, owing to the shortage in motor equipment. From what we observed, however, we doubt whether the plan used would work with our type of organization. Ammunition supply for the regiment has always been one of the items that has caused us considerable concern. Again it would seem that bantams are the answer. Moving ammunition and food forward in bantams greatly lessens the hazard and prevents the loss of time.

One or more reconnaissance planes should be a part of the organic equipment of the regiment or if this is not possible, they should be attached for the duration of the engagement. Many times we felt the need for air reconnaissance and if it had been available, our mission could have been accomplished in shorter time and with less likelihood of loss. The O-49 plane or similar type would fit nicely into our plan of operations.

The horse-mechanized regiment is an organization that has great possibilities for expansion to increase its effectiveness. No doubt this will be done in the near future and the personnel of this regiment looks eagerly forward to future activities with the additional equipment and changes that are bound to come. We are well satisfied that the horse and mechanized combination in one regiment will become permanent in the Army Corps.

106th Cavalry, Last Phase, Louisiana Maneuvers

By Lieutenant Colonel Charles R. Johnson, Jr., 106th Cavalry

ON the morning of September 23d, 1941, the 106th Cavalry (H-Mecz) was assembled under cover in the rearward portion of the area occupied by V Corps. V Corps was on the right of the line occupied by the Third Army *(see Map 1)*. And also at noon on the 23d of September a hurricane, moving in from the Gulf, struck at the boundary between Louisiana and Texas, and swept north. The fringe of this storm hit the regiment at Ville Platte.

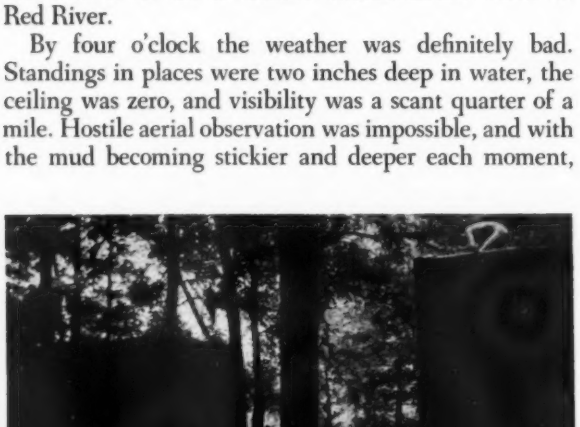
At 3:00 P orders came through from V Corps directing the 106th Cavalry to move forward under cover of darkness to the limiting line for the next phase of the maneuvers, with the statement that troops might cross the limiting line at noon on the 24th. The corps order specified that the 37th Division was to advance as shown on Map I; that the 32d Division, after relieving elements of the 106th Cavalry at the Alexandria bridgeheads, was to advance as shown on *Map 1,* after having been relieved at the Alexandria bridges by the 34th Division. The mission assigned the 106th Cavalry was to move rapidly forward at noon in the direction of Boyce, seize and hold the exits from the bottleneck northwest of Boyce, and the Boyce and Alexandria bridges, until relieved by the infantry. Thereafter the Cavalry's mission was to be one of normal reconnaissance north of Red River.

By four o'clock the weather was definitely bad. Standings in places were two inches deep in water, the ceiling was zero, and visibility was a scant quarter of a mile. Hostile aerial observation was impossible, and with the mud becoming stickier and deeper each moment, the regimental commander decided to move without waiting for darkness. The first vehicle rolled at 4:00 P. The motorcycle troop moved out at maximum speed to secure the limiting line within the regimental sector *(see Map 1)*. The Second Squadron (less motorcycle troop) moved out immediately, following the motorcycle troop at thirty-five miles an hour, to take over its assigned sector on the limiting line. The First Squadron, in portée, then moved in two columns to its assigned positions on the line. Regimental headquarters followed Second Squadron, and the service park was jumped to Glenmora at 9:00 P. All units, upon arrival on the restraining line, occupied concealed bivouacs and took over surveillance of the limiting line within their sectors. Troop F (motorcycle troop) was then assembled at Glenmora.

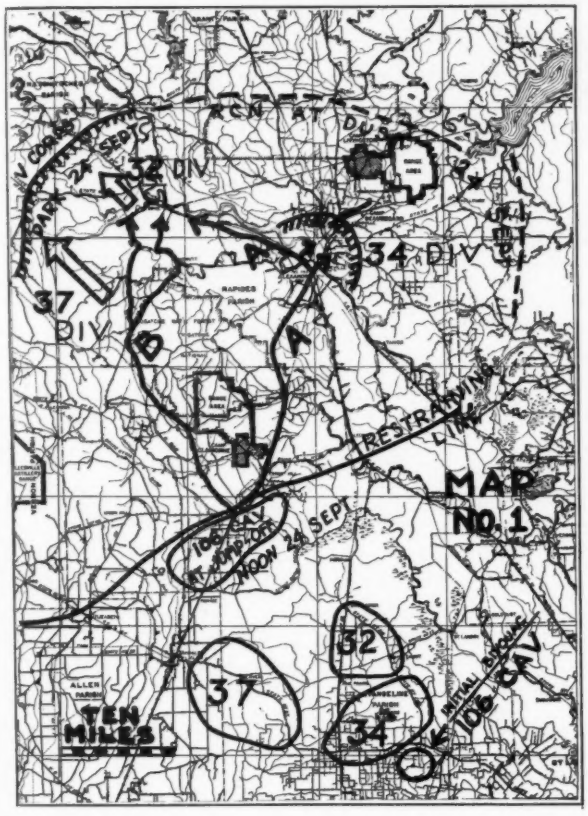
By daylight the wind had reached gale force. Rain came down in sheets. The regimental command post trailer stood in eight inches of water. Notwithstanding this fact, the majority of the men had spent a dry night. All officers and most of the men had purchased hammocks, which they slung between the trees, stretching the shelter-half above the hammock.

The regiment jumped off at noon on the 24th. The motorcycle troop, traveling on hard roads (Route A) at maximum speed, was able to seize both bridges at Alexandria. It was not able to get possession of the bridge at Boyce. It turned out that this bridge was on the Second Army's restraining line, and the Second Army had destroyed it promptly at noon. The Second Squadron (less the motorcycle troop), moving rapidly by Route B *(see Map 1)*, had the mission of seizing the bottleneck northwest of Boyce. It actually reached McNutt before it was seriously opposed. The First Squadron sent Troop C, in horse vans, close behind the Second Squadron. It might be added that these horsemen proved to be exceedingly valuable to the Second Squadron in clearing the area between McNutt and Zimmerman of Red delaying detachments. The 32d Division was very complimentary in its remarks about this troop. Troops A and B, following the motorcycle troop down Route A, were assigned the mission of forming bridgeheads at both Alexandria bridges. The horse vans of this detachment started out in the exhausts of the motorcycles and traveled at thirty-five miles an hour.

The first message to come in was from Troop F (motorcycle troop), signed at 1:01 P, stating that the Boyce bridge had been blown, but that Troop F had possession of the Alexandria bridges and that reconnais-



At Ville Platte. Note trooper on top of horse van, (upper right) taking a rain bath.



sance parties from the horse troops had already arrived at those bridges. The regimental commander, leaving his command post set up at Glenmora, followed Troop F to the Alexandria bridges. As the horse troops detrucked and took over the bridgeheads, elements of the 32d Division arrived at the Pineville bridge and infantry of the 34th Division was starting to arrive at the bridge northwest of Alexandria. The regimental commander accordingly pushed forward his motorcycle troop northeast of the river, directing it on Tioga, and moved his two horse troops, detrucked on Pollock and Bentley. Meanwhile, the Second Squadron (less Troop F), supported by Troop C, pushed back Red delaying detachments through the bottleneck northwest of Boyce. Concurrently, infantry elements of the 32d Division were working forward agressively from Alexandria, through Boyce, and upon their arrival in the Boyce bottleneck the regimental commander relieved the Second Squadron (less Troop F) and Troop C by radio, moving the Second Squadron north and west of Tioga, and directing Troop C, in vans, to rejoin its squadron near Pollock. At the same time he ordered forward the vans of Troops A and B, which had been left in Alexandria when those troops detrucked. Troop F was now given the mission of surveillance of the Red River from the northeast bank between Colfax and Alexandria, to prevent, by fire, a reported Red movement down the river in assault boats, directed on the Alexandria bridges. This naval operation never materialized. Well before dark the 34th Division had taken over the Alexandria bridgehead from the 32d Division, which then fought its way northwest along the south bank of the Red River to the vicinity of Lena. The final positions at dusk of all elements of the V Army Corps are shown on Map 1. The regimental command post and service park were moved forward to Alexandria prior to dark.

Throughout the 25th of September the regiment performed reconnaissance to the line: Clarence—Winnfield—Georgetown, sending a detachment of the Second Squadron, on Third Army orders, to observe the area between Catahoula Lake and the Red River. There was no enemy activity in the latter area. A considerable number of prisoners, however, was taken from the 11th Infantry in the vicinity of Winnfield and the area: Winnfield—Williana—Verda—Luella was found to be strongly covered by Red road blacks and demolitions. The horse squadron was held, prepared for immediate forward displacement, in the area: Dry Prong—Pollock—Bentley. The regimental command post and service park were displaced early on the morning of the 25th to north of Tioga.

On the 26th of September one platoon of Troop E, finding the bridge at Clarence demolished, located a ferry boat, which apparently had been overlooked by the Reds. The men counted their pennies and scraped together enough money to satisfy the ferry boat's captain, and the platoon crossed the Red River into Natchitoches, where it was able to assist the advance of the 32d Division. By dark on the 26th, elements of the V Corps were in the final positions shown on Map 2.

Early on the morning of the 27th the regimental command post moved to Montgomery, but the service park was held at Tioga. Mechanized reconnaissance was pushed forward as far as the line: Coushatta—Jonesboro—Monroe, and small detachments of motorcycles cut U.S. Highway between Monroe and Vicksburg in order to gain information of any wide sweep by the Red Armored Division. One of these detachments actually reached the Mississippi bridge at Vicksburg, some eighty miles east of Monroe. These detachments checked in over commercial telephone lines. The horse squadron was ordered forward in vans to the vicinity of Jonesboro, with a view to cutting the highway between Shreveport and Monroe. By this time we foresaw a Second Army withdrawal east or northeast through Shreveport. The Second Squadron was then turned loose and told that the sky was the limit. The final positions at dark on the 27th are shown on Map 3.

Early on the 28th, mechanized elements from the Second Squadron had cut Highway 80, running from Shreveport to Vicksburg. The Second Squadron had considerable fighting around Coushatta. Among other things it picked up several infantry dumps of blanket rolls, indicating a precipitate Red retirement. I believed that the Reds thought that the entire 34th Division

was advancing behind us. When the Second Squadron captured Coushatta it bagged a surgical hospital and found a very hastily abandoned signal corps installation from which switchboards had been yanked. Upwards of sixty lines, each one properly tagged, were still there. One officer counted fifty or more large reels of wire that had been abandoned. Troop E captured a Second Army gasoline and ration dump at Ruston at about noon, and continued to operate west toward Shreveport and northwest to cut the highway between Shreveport and Eldorado. At Arcadia it captured a Red landing field with fifty planes on the ground. Then the problem ended, at 4:45 P. At this time the regimental command post was in Coushatta, and horse elements were working their way north from Jonesville into a position astride Highway 80 between Monroe and Mindon. As the problem ended the order was going out to the horse squadron to swing west on Mindon. Two hours later the Third Army sent the following teletyped message to V Corps:

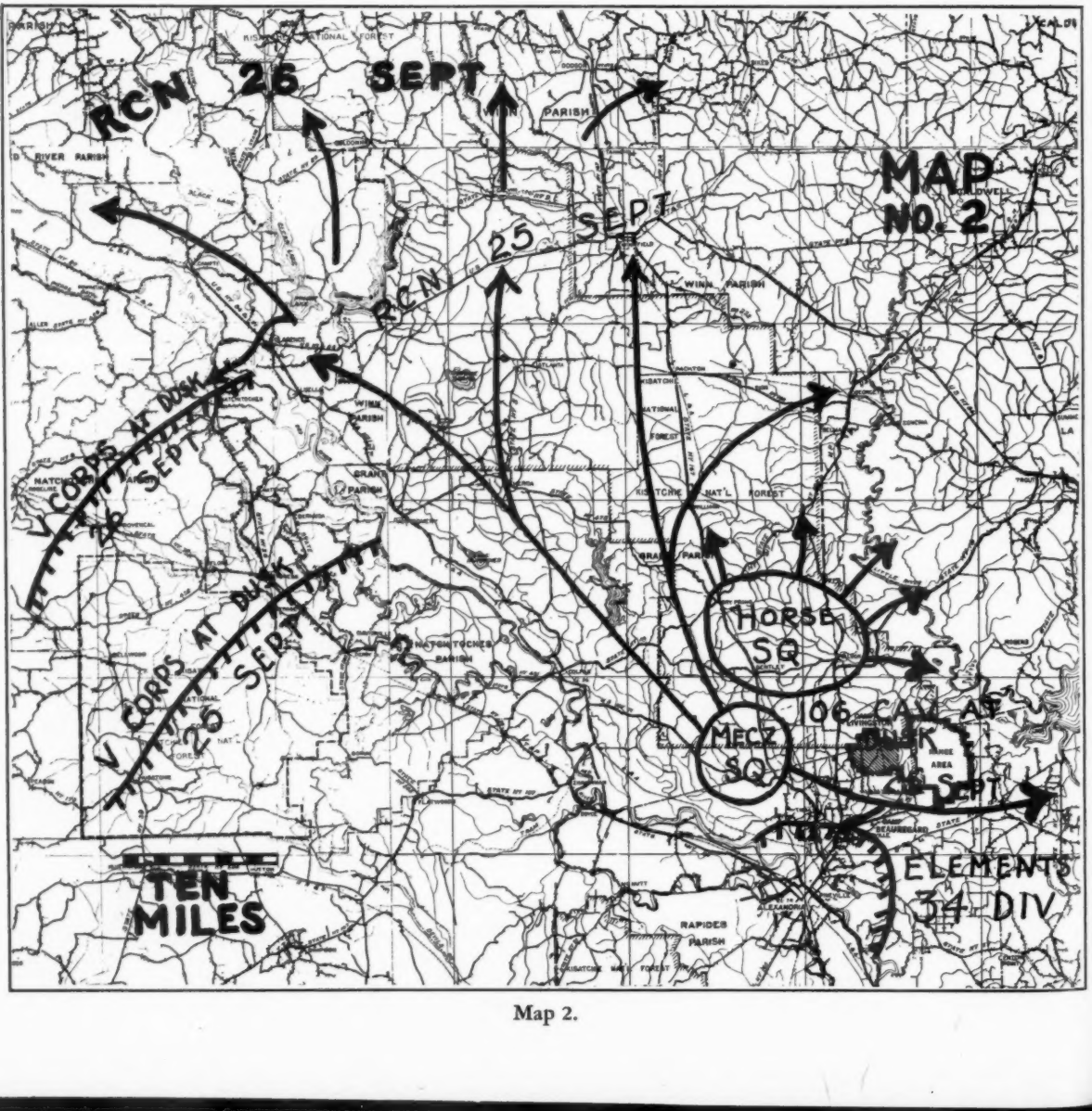
TO: COMMANDING GENERAL FIFTH ARMY CORPS

WELL DONE 106TH CAVALRY

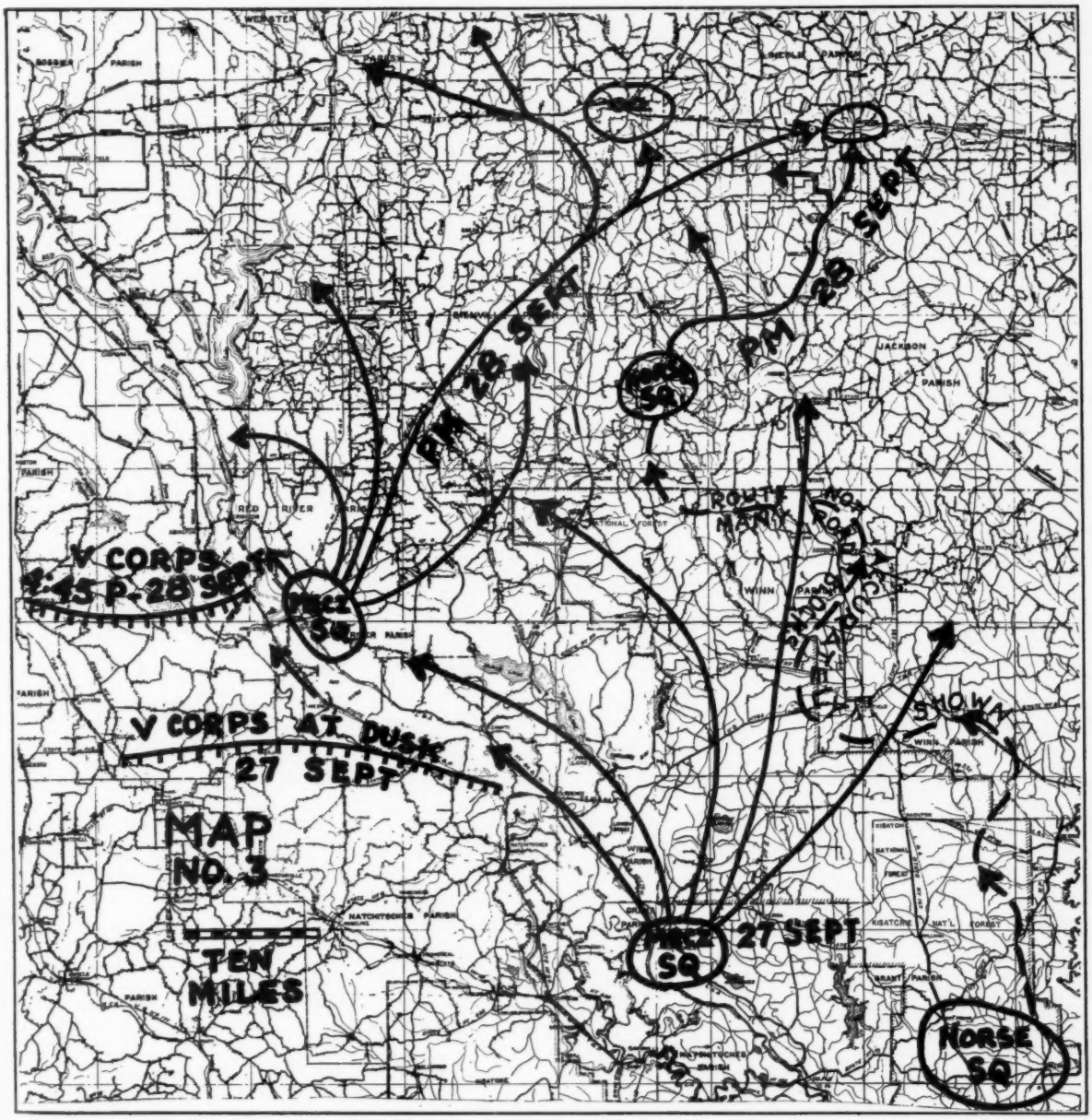
(signed) KRUEGER

The Human Side

At best, a move by move description of any operation is boring. As a relief, let me dwell upon some of the many human touches. First, there is the motorcyclist who was on duty with our liaison officer at Corps. In one operation he covered fifteen hundred miles. His hands were bandaged. The grips had worn the skin from his palms. The weather had blistered the skin on the back of his hands. When he was turned loose to return to the regimental command post he ran his machine into a ditch in the darkness, and broke his shoulder. I don't know how he did it, but he got that machine up with one arm, put it on the road, and cranked it, and rode it in with one hand. Again, an of-



Map 2.



ficer's patrol of horse troopers very early one morning came upon a couple of shelter tents in hostile territory. Several men in their underclothes were asleep in them, and the butts of guns showed from under the blankets. Khaki slacks were lying about. The patrol told them to get up and get the hell out of there; that they were prisoners. The men got up, rubbing their eyes and muttering, and started to put on their clothes. Everything looked fine until the prisoners started pulling on loud lumber jack shirts. It turned out that they were civilians out hunting.

Probably the prize story of the maneuver deals with a rowboat of Red soldiers coming down the Red River. A party from A Troop opened up on this boat by surprise at close range with rifles and light machineguns. The Red sergeant cocked a snook. A Troop's umpire got mad and told the boat to come ashore. The sergeant in the boat told the umpire exactly what he could do with his arm band. Another of the Red soldiers said, "If you want us you can come get us!" The umpire was from Kentucky, and he didn't like that remark. He removed his wristwatch and dived into the river after the boat. This only amused the Reds all the more, and they were getting away from the umpire fast when he decided to fake a drowning. The Reds got scared and rescued him; and then he brought them into camp. Incidentally, he walked them eight miles.

Then, too, we have another touch. There is the story of the lone motorcyclist in an earlier maneuver who ferried his machine across the Red River in a rowboat.

Mechanized squadron action.

Two days after that particular phase of the maneuver ended he still kept telephoning direct to corps headquarters his reports of Red and Blue movements, and they were accurate reports. For two days he had been observing a separate maneuver between elements of the Fourth Corps, and didn't know it.

The regimental commander desires to pay a glowing tribute to his motorcyclists. The regiment entered the maneuver with very few of its radio sets. The most we ever had at one time was nine. There were times in the earlier maneuvers when our reconnaissance, measured from tip to tip, covered a front of two hundred miles. Without our motorcyclists we would have accomplished very little. They were cheerful, they were willing, and they were daring to the point of recklessness. Above all, they were resourceful. I cannot yet understand how it is that the average private, out by himself, could go through three or four commercial exchanges to get a call in, let us say, for Lufkin, Texas to the corps G-3, at De Ridder. The corps G-3 himself laughingly told me that when one of those calls came in he himself was experiencing difficulty getting a call through to a phone in the town in which the corps command post was then located.

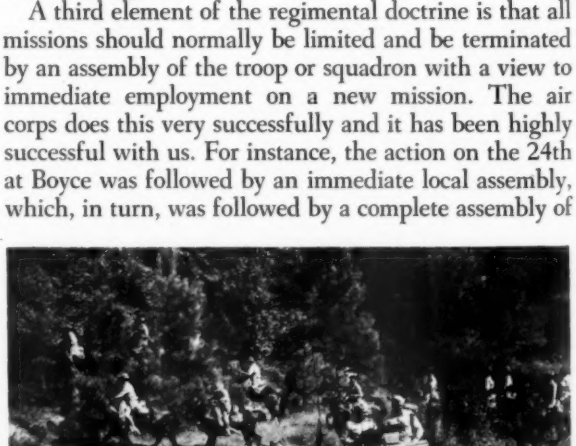
Discussion

These maneuvers, to my mind, confirmed us in our tactical doctrine. This regiment avoids, as much as the situation will permit, the use of scoutcars in any area until the motorcycle troop has indicated that need for scoutcars exists. This prevents premature employment of scout cars. Furthermore, the regiment normally refrains from the use of horses in any area until, by employment of scoutcars, we have proven the necessity for horses in that area. This avoids the premature commitment of our horse elements and saves wear and tear on the animals. It allows them to get the maximum rest and it keeps them held well in hand until the need for their employment arises. We do not favor the formation of arbitrary horse and scoutcar teams. We think that such practice frequently puts horses in parts of the zone where they are not needed and so disperses our horse units that when we need them badly in an area where they count, it is difficult and slow to reassemble them and move them to that area. At first glance it would appear that we did not follow this practice upon our jump-off. As a matter of fact, however, I clearly foresaw that we had a reasonable chance of getting the Alexandria bridges. I wished to continue reconnaissance north of Alexandria as early as possible, and needed greater rifle strength to relieve my scoutcar elements at the bridges. I could also foresee that the cross country ability of the horse would make it of extreme value in forming the bridgehead north of Alexandria. It was for that reason that I committed two troops at the jump-off.

Similarly, we considered it very improbable that time and space factors would allow us to grab the Boyce bridge or the Boyce bottleneck. I felt sure that we would have to fight for those features. Knowing the nature of the close and swampy terrain near Boyce, I figured that horse assistance was absolutely necessary at Boyce. It was for that reason that I committed a horse troop to that area right from the jump-off. Please note, however, that as soon as infantry relieved us at Boyce, it was my first concern to reassemble the horse squadron near Bentley and place its vans at its disposal, throwing forward all mechanized reconnaissance on a wide front to search for a profitable place of employment for the horse elements. One look at Map 1 will give a clear idea of this employment (positions at dusk, 25 September). The point I wish to make is that by employing the horses at the jump-off, I was not, in this case, violating the regimental principle of holding horse elements well in hand. The later operations (September 27th and 28th) clearly justified the assembling of the horse squadron near Bentley.

We have always believed that in the general case, mechanization (unless you are willing to sacrifice it) should never be sent into an area unless there are at least two ways out.

A third element of the regimental doctrine is that all missions should normally be limited and be terminated by an assembly of the troop or squadron with a view to immediate employment on a new mission. The air corps does this very successfully and it has been highly successful with us. For instance, the action on the 24th at Boyce was followed by an immediate local assembly, which, in turn, was followed by a complete assembly of



Horse squadron moves in.

each squadron northeast of the river. Having the squadrons completely in hand, we were able to make a fresh start on the morning of the 25th.

As to communications, we realized that the chief reason of our existence was to furnish corps with prompt information. I believe that information passed from patrol to platoon to troop to squadron to regiment and thence to corps will never be of any value. Men of this regiment, down to privates, were impressed by the idea that the most important thing they could do was to get information to corps. Frequently our patrols communicated directly with the regimental liaison officer at corps, who in turn relayed their information back to the regiment. Each platoon carried a telephone with which to tap commercial lines. Each patrol member was instructed how to contact VICTOR 2 by long distance. *Victor* is the code name for V Army Corps command post. Platoon leaders did not hesitate to send motorcycle messengers direct to corps when that means would save time. We invariably maintained constant communication by phone with our liaison officer at corps. When corps trunks were overloaded, he secured for himself the service of the nearest commercial telephone, and ran a constant relay of motorcycle messengers between this private phone and his sergeant assistant at corps. We were very particular to place especially selected individuals on our liaison detachment at corps. Customarily we had one officer (sometimes two), two sergeants, and three motorcyclists.

We bolstered our horse squadron with four radio equipped scoutcars. Two of these we stole from Service Troop and two were taken from the scoutcar troops. We were generous in alloting motorcycles to the horse squadron. This practice paid major dividends. The radio transmission was continuous, a thing obviously impossible with pack sets. Messenger service was good. Frequently, when we were willing to gamble with our horse vans, the presence of four scoutcars added materially to the safety of the vans and the peace of mind of the squadron commander.

I do not believe that one can say that in a horse-mechanized regiment the impetus of supply is rear to front. We covered such extensive fronts that it was found that the only practical supply solution was for the supply officer to set up predetermined ration, fuel, and forage dumps, and to have all organizations send back to those dumps for their supplies. To have attempted to run things in such manner as to allow the supply officer to push forward supplies to us would have subordinated the tactical to the administrative.

I now thoroughly believe that on a parallel pursuit the horse vans must go wider to the flank. On the 28th our scoutcars were able to work their way forward through road blocks some twenty miles outside the hostile flanks, but the horse vans had a great deal of trouble. I now believe that I should have sent the horse squadron at least fifty miles, possibly more, outside the hostile flank. Had we done this we could have cut Highway 80 before daylight on the 28th, and from that point could have continued to close in on Shreveport in vans for many miles. As it turned out it was necessary to detruck in the vicinity of Jonesboro.

In the phase of the maneuver just discussed there was no close coöperation between the regiment and the air. In the initial stages flying was impossible. In the latter stages the limited number of light planes did not permit them to be assigned to us. On previous maneuvers, however, we have been very successful in the use of the cub type or the 0-49. Each command car in the regiment has the top of its hood distinctively painted in black and yellow. We frequently used our own officers as observers, and as they were familiar with the meanings of these black and yellow markings, coöperation between the air and the ground was almost perfect. It might be thought foolish to give one's self away to the enemy air by distinctive markings, but I have always thought that the enemy will expect you to be active on reconnaissance, and I do not think it matters much whether or not he knows that you are reconnoitering a certain area. On the 28th the fact that he did know we were reconnoitering northeast of the river apparently lead him to believe, erroniously, that the 34th Division was in back of us. I can see no other reason for his precipitate abandoning of his installations in that area.

There is one unique situation that confronts a reconnaissance element. It precedes the advancing columns. When the two forces meet, it either withdraws to a flank, or flanks, or it sideslips and continues through into the hostile backfield. If it withdraws to the flank, or flanks, it ceases to be a reconnaissance element and becomes merely a security force. If, on the other hand, it sifts through into the hostile rear area, it finds itself completely isolated. The lines of contact close in behind it. It cannot get out to either flank, because nowadays the enemy, if he has sense, will block off both flanks of his rear area with a tight line of road blocks, demolitions, etc. If the enemy is still more logical, he will close off his rear with road blocks. If our reconnaissance elements get in to this type of *cul-de-sac,* they continue to function as long as they have supplies, and secure extremely valuable information, but they cannot be supplied. For that reason we have fitted the bulk of our scoutcars with racks, each carrying ten five gallon gasoline cans. Similar racks are being placed on vans, trucks, and reconnaissance cars. The regiment can jump off with five hundred miles of gasoline. Furthermore, we made it a practice to carry two C-Type rations, and supplemented that by four more rations in all vehicles. These rations we made up from our ration surplus. They were purely for emergency use, and consisted of canned corn beef, beans, salmon, and other canned goods that could be eaten uncooked. With five hundred miles of fuel and six day's rations, which is our criterion, any isolated, trapped unit can continue to sneak, peek, and report for almost eight days. The Third Army was most generous to us in this matter.

Employment of 4th Cavalry (H-M)*

DURING the recent maneuvers the regiment was assigned the missions of reconnaissance, counter-reconnaisance, security, forcing a crossing over Ouachita River and establishment of a bridgehead in the face of hostile resistance, harassing action of hostile lines of communication, attack, delaying action, and, in the final hours of the maneuvers, as a reserve for the 2d Cavalry Division. In the execution of the above missions, the "Employment of the 4th Cavalry" was adhered to and proved sound.

In view of its ability to provide elements or combinations thereof in accomplishing assigned missions, the maneuvers clearly indicated that the present organization of the horse and mechanized regiment is, in general, sound, and the regiment is capable of efficiently performing the missions for which it was designed: Namely, reconnaissance, security and limited combat for the infantry corps. This belief is held by the present regimental commander,[1] who has served with the 4th Cavalry through its reorganization on February 1, 1940, and throughout the Louisiana maneuvers of 1940 and 1941; and it is substantiated by the expressed opinion of every experienced officer of this regiment who has taken part in the training of the regiment and witnessed the employment of its component parts during the recent maneuvers.

The Commanding General, 2d Cavalry Division (to which this regiment on occasion was attached), having an expert knowledge of the capabilities and limitations of the horse-mechanized regiment, assigned missions for which the regiment was designed, and when such additional means as motorized artillery or antitank weapons were required, automatically attached them to the regiment. Tanks, aircraft and engineers supported our operations and, in the river crossing, antiaircraft artillery was attached to the regiment. *Not once* was the regiment frittered away by detaching elements to other units for special missions.

In the execution of missions, mechanized and horse elements operated independently or in combinations, with other supporting weapons attached, as dictated by the particular situation. In other words, the regiment, in reality, was employed as a task force, and performed the missions of reconnaissance, security and limited combat assigned it from time to time. By its mechanized strength, animal strength, fire power, communications, antitank, pioneer and demolitions, service elements, and by its mobility, the regiment was able to meet promptly all missions assigned, and with the necessary proportion of required elements.

For the efficient employment of the horse-mechanized regiment, it is necessary for all officers, from the regimental commander down to include platoon leaders, to have a thorough understanding of the employment of each element of the regiment individually and in combination with other elements thereof. This training was not only conducted but repeatedly practiced in field exercises prior to departure of the regiment for the maneuver area, with the result that task forces were quickly formed and dispatched during the maneuvers and were commanded by officers who knew how to employ their commands. The soundness and value of this training were clearly demonstrated in the maneuvers. For example, in the first phase of the GHQ maneuvers, the regiment was given the mission of protecting the right flank of the I Armored Corps and of the Second Army along the general line: Keithville-De Berry-Sabine River to Converse, a distance of eighty miles. The mechanized squadron (less Troop "G") formed the screen, with Troop "G" and the 1st Squadron in regimental reserve.

On two occasions when Blue gained a foothold east of the Sabine River, the Commanding Officer, 2d Squadron, was sent with Troop "G" to reënforce the mechanized detachment under attack and in both cases drove back the enemy and regained control of the river. On another occasion, when two hostile dismounted troops forced a crossing fourteen miles northwest of Logansport and established a bridgehead two miles east of the river, the 1st Squadron (less one troop) in portée, with one motorcycle platoon attached, was sent rapidly to the locality. There it detrucked under cover of darkness and, supported by a motorized battery and one airplane for spotting and observation, attacked at dawn the following morning and by a double envelopment captured the hostile bridgehead force, thus regaining control of the river line. On another occasion, a combination of mechanized and horse elements were sent forty miles to cut hostile communications along U. S. Highway 80 between Ruston and Monroe. In spite of destroyed intervening bridges defended by hostile infantry, the motorcycle and the horse elements crossed the Bayou D'Arbonne by rafts and swimming and not only cut Highway 80 but captured considerable hostile personnel and matériel. Again, on 26 September, the 1st Squadron, with Troop "G" (less one platoon), one battery, 3d Field Artillery and antitank elements from the 2d Cavalry Division attached, successfully delayed the advance of an armored force along Highway 96 between San Augustine and Shelbyville and covered the withdrawal of the 2d Cavalry Division. In addition to the ability of the regiment to form task forces for particular operations, another of its inherent assets is its mobility.

The average rate of march of the regiment was twenty-five miles per hour, with a cruising speed of thirty miles per hour, and no difficulty was experienced in portée elements keeping up with the mechanized elements.

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*Excerpts from official report.

[1]Colonel John B. Coulter, recently appointed a Brigadier General and assigned to the 2d Cavalry Division, Camp Funston, Kansas.

The Fight at Mt. Carmel

By Major Leonard H. Nason*

THE light tank regiments of the armored divisions are supposed to represent the hussar and lancer regiments of the old Napoleonic cavalry divisions, being employed both for close-in reconnaissance and for shock against broken infantry. They are, in addition, intended to perform that other standard cavalry mission, "seizing and holding," until more powerful, but slower, troops can come up and take over the cavalry lines. The following account by an eyewitness and unhappy participant may serve as an example of the latter mission for light tanks in the 1941 Louisiana maneuvers.

The Approach

Executive Officer Light Tank Battalion was leading his three tank companies down Highway 171 in search of the Battalion Commander who had gone ahead to meet Brigade S-3. This was the general prelude to an attack. Executive Officer had no idea of the General Situation, Location of Our Own or Supporting Troops, nor of the Special Situation either Blue or Red. At an unnumbered cross roads below Fisher, the battalion was halted by the Battalion Commander, who was still waiting for Brigade S-3. A tank organization when halted at once takes cover, an operation similar to placing the led horses in a place of security. This Executive Officer proceded to do, hoping he would have time to get the battalion spotted under the trees before it was ordered out again. In this he was disappointed, because Brigade S-3 appeared and issued the following attack order:

"The Brigade Commander desires that you attack along this road." (Pointing).

The Battalion Commander then took off "at the gallop."

Executive Officer ordered the battalion to follow him, ordered three motorcyclist scouts and the battalion adjutant in a bantam out as advance guard and followed the Battalion Commander, down the indicated road.

Executive Officer had found by experience that an officer can do two things in maneuvers, he can play war, or he can play maneuvers, or a judicious mixture of the two. Playing maneuvers, Executive Officer at once decided that he was on his way to a good fight, since many observers' sedans, press cars, and commercial radio and newsreel cars kept passing the column, headed in the same direction. Executive Officer knew of course that any element of surprise so necessary to the operations of either light tanks or cavalry would be lost forever by the arrival of the caravan of observers at the enemy position. He decided to accompany the observers and the newsreel boys in their own dust cloud, and arrive simultaneously with them at the enemy lines. A dirty trick on the enemy, but then—.

At the intersection of the Florien and Mt. Carmel[1] roads, the Battalion Commander was observed in conference with an artillery officer. The Battalion Commander signaled "Continue the advance."

It had been found by experience that after initial contact had been gained, the motorcycle scouts, the bantam, and the half track, as well as any tanks visible, would be ruled out *de facto*. Executive Officer planned to save the half track by hiding behind a sound-truck before the dust settled, a subterfuge that had worked well in the past. But upon arriving at a ridge some three hundred yards from a small town, he found the ridge occupied by confused infantry, retreating machine guns, and perspiring officers. Artillery fire was marked by the conventional red flags with white centers. The observers and sound trucks with their accompanying dust cloud continued on, while the tank battalion halted and took cover in the woods.

From a brigade staff officer to Executive Officer Tank Battalion, verbal: "For Crysake what are you stopping for? That's our own barrage, I asked for it myself! Get going!"

At this point an umpire appeared and all question as to whether a friendly barrage was just as deadly as an enemy barrage or not was removed by the umpire ordering Executive Officer, Staff Officer, and half track a hundred yards to the rear or else be immediately ruled out for the duration of the exercise.

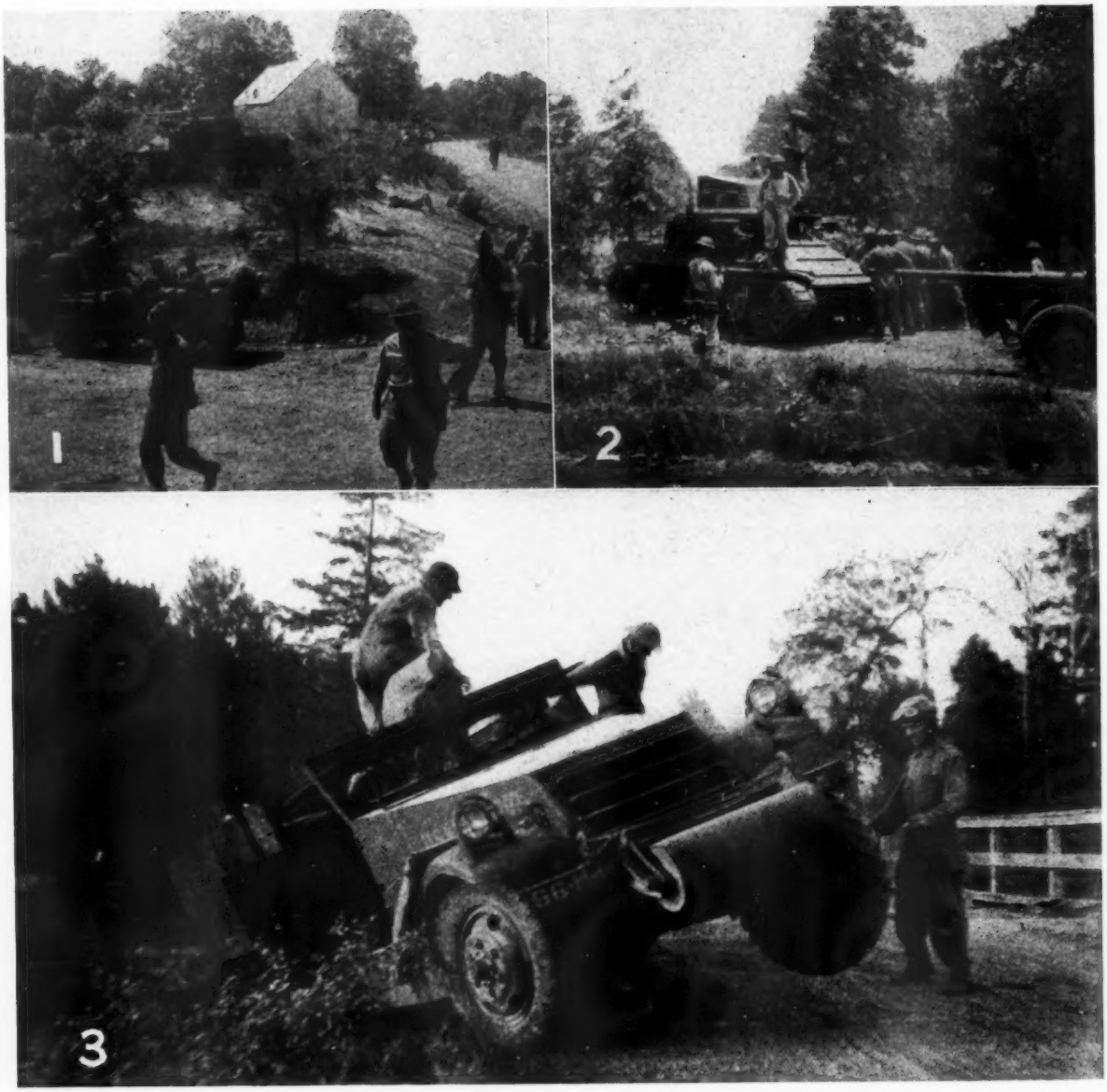
During the period that the barrage lasted, Executive Officer dismounted and found out that the town ahead was called Mt. Carmel, that it was held by at least a battalion of infantry, with many antitank guns in position, and considerably more in reserve. Many artillery officers, recognizable by their clean khaki uniforms, had been observed reconnoitering.

When the barrage stopped, Executive Officer moved forward and took up a position in observation. He then ordered the half track forward. The motorcyclists and bantam with adjutant had disappeared, possible destroyed by the barrage. In any event, gone. The unhappy half track attacked alone, supported by one tank. These were of course ruled out the instant they struck the town.

As soon as the umpires white flags went up, suspending all further action, Executive Officer rejoined Battalion Commander, who had been waiting for him, and Executive Officer was able to say that four yellow flags had gone up when the half track hit the town, indicat-

*66th Armored Regiment.

[1]For orientation, see map, page 51.



1—Maneuvers deadliest weapon in action surrounded by his victims. 2—"Come outta that, you're dead!" Capture of a medium tank by an umpire and a 75-mm. 3—Exhausted half-track preparing to lie down.

ing four seventy-fives in position. The road through Mt. Carmel swung south past a school house with a large open playground about it, defense was massed at the western edge of the town, and the crossroads by which any support must come was blocked by a concentration of umpires' cars, sound trucks, and soft-drink wagons. Infantry in semi-hysteria were standing about the square, the playground and the roads in disorderly groups.

Contact

When the white flag went down, the Battalion Commander led two tank companies through the woods to the south of Mt. Carmel, bringing them out on the Florien Road south of the schoolhouse, taking all the defenses and defenders in the rear, to the horror and surprise of all, including the umpires.

The truce that followed was prolonged, since it took a long time to assess casualties, decide who should retire and to what positions (why should any retire, they were all dead or prisoner). During this truce Mt. Carmel was raided by air, in quite as realistic a visit as one would care to see. Dive bombers zoomed in swarms above the treetops, their flour-bag bombs falling upon the just and the unjust, Red and Blue. One flour sack made a direct hit in the middle of the concentration of neutral cars in front of the schoolhouse, and many were the cries from both Red and Blue that all the road lice be ruled out for the day, but the suggestions were

received with tolerant smiles. Rare is the umpire who will rule out his own transportation!

Umpire truces were generally used by the antitank forces to bring their guns into position, while the tank officers reconnoitered for them and so had them located when the war started again. Pursuant to this mission Executive Office sneaked up the ditch north of Mt. Carmel and lay in the grass observing.

The appearance of two tanks sent to outpost the northern approach to the town indicated the end of the umpire truce. Executive Officer then rejoined the Battalion Commander. It was then about 11:30 AM. Battalion Commander explained the battalion mission. "To hold Mt. Carmel until 3:00 PM." At present, the only supporting troops were one battalion of infantry (armored) already badly chewed by previous encounters and by the friendly barrage west of Mt. Carmel that had landed on the back of their necks. As for the local situation, two tank companies, "G" and "I" held the eastern and southern approaches, directions of the major threat, with "H" Company in reserve to the west. Executive Officer then reported that he had located a force on the northern edge of the town, in the woods, that he had seen an artillery colonel, a lieutenant colonel, and an infantry major observing the ground to their south and west, and that there was undoubtedly a battalion of infantry in support of a considerable force of artillery on the north edge of the town. Two tanks was not sufficient to hold this force should it attack. Executive Officer was allowed to add his own staff tank to his force, which made three, and given authority to pick up any stray tanks he found wandering. This, Executive Officer construed to give him authority to take a platoon from the reserve company, which he did, leading them through the woods to a concealed jump-off position. Meanwhile the two outpost tanks had gathered in a hostile infantry patrol, from which information was received that the force in the woods was a battalion, that it had marched all night and was now asleep, and that it was supporting an antitank regiment in position covering the northern approaches to Mt. Carmel.

At this point a patrol of four friendly half-tracks arrived from the north, and reported the road open. Here then, was a plum of infantry and artillery ready for the plucking. Executive Officer at once asked Battalion Commander for permission to attack, using his seven tanks plus the four half tracks. To insure secrecy, a motorcycle messenger was sent instead of using radio which might be intercepted. No reply was received, instead the balance of the reserve company, "H," appeared through the woods and placed itself at Executive Officer's disposition. This made fifteen tanks, and four half tracks, sufficient force to surprise and destroy both infantry and artillery.

The Attack

Attack order: "Attack straight through these woods due east until you reach a road running north and south. Assemble south on the road and return to Mt. Carmel. Be especially careful of infantry lying down. Take it easy now, we don't want to run over anyone. Let's go!"

The platoon leader of the leading tank platoon had just signalled "Wedge" and crossed the road, when an infantry umpire popped up a white flag and halted the attack. Under the rules of the GHQ Umpire Manual, he explained, tanks must halt when within a hundred yards of ground troops. He would be glad to consult with the tank umpire as to the decision.

During the truce, the Battalion Commander appeared in his tank, announced that he had coördinated an attack in this force in front of both "G" and "I" companies, and expressed astonishment and surprise that Executive Officer should be sitting in the ditch in complete inertia.

Executive Officer explained that he had been ambushed by an umpire, and that the umpires had all retired into the woods to wake everybody up and tell them to get ready for a mechanized attack.

The Battalion Commander reported that he had been promised a medium tank battalion, an additional battalion of infantry, an aerial attack and the intervention of the 27th (friendly) Division, the whole to hit Mt. Carmel at 3:00 PM. It was then 2:20 PM, and it was decided that since the hostile force had now been alerted, that the only solution was to attack it, rather than wait for the arrival of promised friendly support. When the white flags went down, the battalion attacked, directing its effort between the infantry and the supposed antitank guns, to mask the latter's fire. The antitank seventy-fives fired, nevertheless, although they burned not a few infantry tails with wads, to the rage and disgust of the infantry.

Executive Officer, during the umpire truce, continued his reconnaissance mission, this time employing his tank. He had been alarmed by the fact that his four

Charging tank. It would have been vulnerable if the AT gun crew had awaited the tank's final gallop.

borrowed half tracks, bidden by their own radio, had departed without waiting for the umpire's decision. A motorcycle messenger from "G" Company reported that the roads south were swarming with hostile infantry and artillery, the infantry detrucking, and the artillery going into position. "H" Company's bantam, sent north as combat patrol half an hour ago, had not returned, indicating probably capture. A motorcycle, sent to the Command Post of the armored infantry, reported it empty, and no sign of friendly troops anywhere.

Instead of the promised support, a blizzard of enemy infantry arrived from the south and east, accompanied by .37's and seventy-fives, in the face of which the Battalion Commander ordered a withdrawal, a withdrawal so hasty that it left Executive Officer on the far side of the enemy. In the confusion, however, of infantry charging *a la* Pickett, throngs of vociferating umpires, and an air raid by navy bombers employing a new tactic, viz., cutting tops off trees and hurling them on all below, Executive Officer was able to make his escape, and rejoin the retreating battalion.

The tank battalion fell back several miles, where it met the promised support, and bivouacked in woods. But the promised support took off after dark, the light battalion was unmercifully bombed in bivouac, and did not receive permission to withdraw until almost midnight, during which time it lost a company commander to prowling infantry.

The battalion withdrew at midnight to the position from which it had moved in the morning, having lost nineteen tanks, the half track, all the motorcyclists save one, and the battalion bantam and adjutant. On going into its final bivouac it was located by aerial flares and bombed again.

Honors of the day divided equally between the umpires and the air-corps.

Lessons learned:

Armored Infantry is as afraid of losing its vehicles as cavalry is its led horses, and is prone to take off in consequence.

One of an armored force's greatest trumps, the dust and smoke of its own attack, cannot be played in maneuvers against ground troops unless the coöperation of infantry umpires is secured beforehand, a condition that rarely will exist.

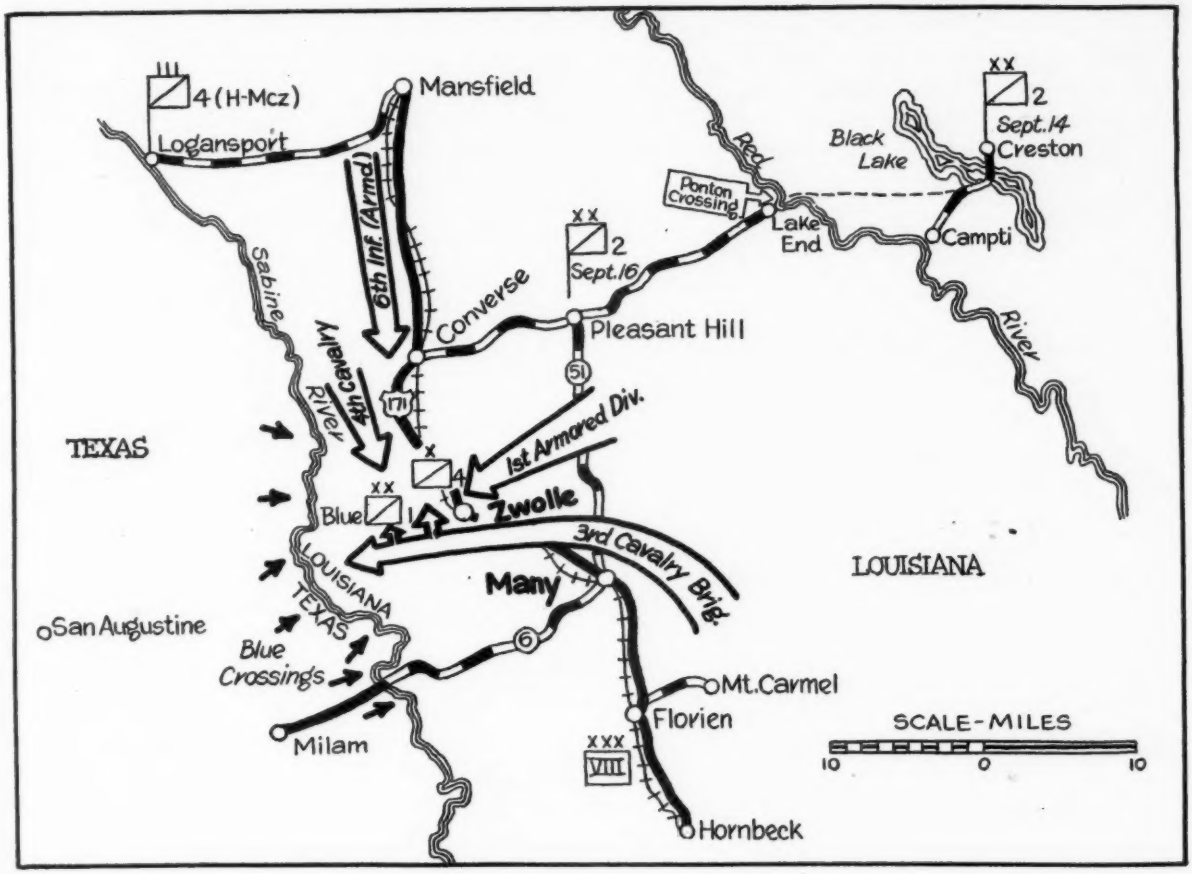
The employment of an armored force without total air superiority will probably mean the destruction of the armored force.

Know the Worst

To know what is best in an organization is, no doubt, most satisfying; yet satisfaction is not the road to efficiency. To know the worst is, I think, more helpful, and to criticise what is bad, so long as criticism is constructive, is surely the road to all progress.—MAJOR GENERAL J. F. C. FULLER, *in The Army In My Time.*

No Reason to be Irritated

It is also sometimes true that a commander will find that one of his staff is so able and expert that his advice almost always offers a suitable basis for decision. To some commanders this may be an irritating state of affairs—to have as an assistant a staff officer or noncom who is always right. Other commanders, the true leaders, thank God that they are lucky enough to have such assistance. There need be nothing at all embarrassing in such a situation. An able leader will in fact learn, and learn gladly, from an expert subordinate. Actually, of course, the decision itself is always his, and even if there are few major differences of opinion on his part there will always be occasional minor ones on which the commander's decision will be his own.—MAJOR EDWARD L. MUNSON, JR., *in Leadership For American Army Leaders.*



The Battle of Zwolle

By Major M. H. Lucas, GSC*

ON Sunday, Sept. 14, the 2d Cavalry Division had completed a two days' rest period and were camped in and about Creston, La., awaiting disposition in the GHQ maneuvers. The battle, matching the great Blue Third Army under Lieutenant General Walter Krueger against the Red Second Army of Lieutenant General Ben Lear, was to start at 12:01 o'clock that Monday morning. Scout car radios buzzed continually and men huddled in the cold dew without tentage as the motor and horse elements were ready to move on a moment's notice. A ponton bridge had been thrown across the Red river at Lake End, La., by the 43rd Engineers, and the Division awaited breaks in the endless column of Infantry to cross. Troop "A" of the 92nd Reconnaissance Squadron under Capt. Caesar Fiori had reported no enemy movements near the Red river. At 9:30 AM, of the 15th the 3d Brigade under Brigadier General Terry Allen crossed on the ponton bridge and advanced to a camp on State Highway 180 leading into Pleasant Hill. The 4th Brigade followed them later on the 15th. Motorized reconnaissance elements had been working west of the river throughout the day, and early in the afternoon of the 15th the balance of the Division's mechanization crossed at Coushatta, setting up Division Headquarters north of Pleasant Hill and consolidating the position of the Division.

On the 16th, one of the greatest experiments of the maneuver was initiated. The 2d Cavalry Division, a horse outfit under Major General John Millikin, was attached to and joined the I Armored Corps for a concerted drive to the south. The 1st Armored Division was to move far to the east without regard to the Corps boundary. The 2d Armored Division was to attack to the south. The mission of the 2d Cavalry Division was to move down the boundary between the VII Army Corps and the 2d Armored Division, assisting the 2d

*A C of S, G-2., 2d Cavalry Division.

Armored Division in gaining and holding ground against the intense anti-mechanization front presented by the opposing VIII Army Corps (Blue). It was also to protect the flank and rear of the Second Army. The 4th Cavalry, attached to the 2d Cavalry Division, had its CP located at Logansport, and to the horse-mechanized outfit came the job of guarding the Sabine river crossings. Their zone of action extended north and south from Logansport along a front of nearly 100 miles.

Throughout the day of the 16th, aerial observation of the 1st Observation Squadron, based at Shreveport, and ground reconnaissance of the 4th Cavalry revealed increasing concentrations of hostile cavalry (1st Cavalry Division with the 56th Cavalry Brigade attached), around San Augustine, Tex., west of the Sabine river. Further reconnanssance to the south reported the 6th Cavalry (H-Mecz), and the 113th Cavalry (H-Mecz), screening the front of the VIII Army Corps (Blue) in the vicinity of Florien, La. The Division advanced without contact to Many, La. The armored units were drawn up for battle on the 17th, and the busy radios went silent as the units girded themselves for the battle on the morrow.

Anticipating river crossings by the enemy to the west, G-2 of the 2d Cavalry Division asked for aerial photos of every possible Sabine river crossing. These were furnished by the 1st Observation Squadron and air units were dispatched by them for hourly reconnaissance of these points.

On the morning of the 18th, while the rest of the Division remained in mobile reserve, the 3d Brigade, under Brigadier General Terry Allen, was committed to action at Mt. Carmel with the 2d Armored Division attacking also on the 3d Brigade's flanks. Only one brigade was put into action due to the narrow front assigned the Division. A "dog fight" ensued on a line between Mt. Carmel and Florien with the tide of battle surging back and forth between the Blues and Reds. The Red ground reconnaissance elements had been sent out to "work" the area between the Sabine river and U. S. Highway 171 almost to an east-west line extending through Hornbeck, and had found no Blues. This information was sent to the Corps, but for some reason the attack plans were not changed and the Red armored forces ran into nests of anti-tank guns, destroyed bridges and land mines, and the opposing forces were deadlocked. An armistice, therefore, was called by the umpires in that area until 5:30 AM of the 19th.

About 4 PM of the 18th the 2d Cavalry Division received word from several sources that the hostile 1st Cavalry Division with the 56th Cavalry Brigade were crossing the Sabine river on the widest possible front—using every crossing between Converse, La., and a point just south of Highway 6. The area from Converse to the north was held by the 4th Cavalry which resisted all attempted crossings, but the Blues were coming over between Converse and a point about 10 miles below the bridge over Highway 6. Upon receipt of this information the Division, less the 3d Brigade, was moved to the northeast of Many and Troop "A" of the 92nd Reconnaissance Squadron and the Division Engineers, under Major Harry O. Paxson, were rushed to the spot to impede the enemy along Highway 6. Action along the highway stopped the Blues in that area—one squadron of which had the mission of taking the Many, La., airport—and the remainder went into bivouac. However, it could be seen plainly that their main objective was Zwolle, Red railhead, for all the enemy columns were converging towards it. General Millikin thereupon called upon his 4th Brigade—the Colored 9th and 10th Cavalry regiments—to move to Zwolle. The mission he detailed for them was to hold and delay until the 3d Brigade could be brought up, to move out to the north-

—Photo by *Life Magazine*

Combined employment of Cavalry, Armored Force and Aviation, in the Battle of Zwolle.

east only when forced to by superior numbers and to draw out the enemy so as to expose the flank of the 1st Cavalry Division. By forced night march through steaming bayous and dense woods the 4th Brigade arrived at Zwolle at daybreak of the 19th. They held the town against superior numbers until approximately noon of that day. So well did they contest their ground that Major General C. L. Scott of the I Armored Corps praised their "enthusiasm, interest and actions" in a letter to General Millikin. However, superior forces finally prevailed and the 4th Brigade was pushed back to the northeast of Zwolle, but succeeded in drawing out the Blue forces with them as the Division Commander had planned. In the meantime, at 5:30 AM when the umpires' armistice ended in the Mt. Carmel area and the 3rd Brigade was released for further action, it was ordered to hasten to Zwolle and strike the exposed Blue east flank. Meanwhile, units of the Armored Corps had been thrown into action by the Corps Commander and joined the 2d Division units in a coördinated attack by road and across country both from the southwest and northeast in conjunction with the 3d and 4th Brigades, respectively. The new Red forces began to sideslip each other until they had almost completely surrounded the Blues in the Zwolle area, cutting off the numerous enemy columns. Meanwhile, the Reconnaissance troops and the Engineers sent to the Sabine river area earlier had slipped behind the Blue lines—as had elements of the 4th Cavalry from the north—and succeeded in creating a lot of trouble in the enemy's rear lines, including capture of G-1, Headquarters of the enemy Division, seizing maps, codes, signal plans, etc. The termination of that phase of the maneuver was the salvation of the Blue forces at Zwolle.

Cavalry March Training*

FOLLOWING the World War of 1914-1918 almost all military experts had agreed that the age of horse cavalry had passed forever, that there was nothing more left for it to do on the battlefield. It is true, of course, that the speedy development of technical equipment has transformed not only the army but the very nature of combat as well. It must be remembered, however, that horse cavalry has also undergone a change and and that it now differs radically from its predecessor of 1914-1918. Is it possible to find today horse cavalry armed only with the rifle and saber?

While retaining the horse as its basic weapon, cavalry, like other arms, has absorbed the new and different weapons. Experience shows also that this new armament does not hinder the horseman, but, on the contrary, helps him greatly and renders cavalry units more mobile and speedy. Mobility, coupled with excellent armament and training of personnel, is the factor which permits the cavalry of today to perform even the most complicated combat missions.

Strategically, horse cavalry will be employed in mass for decisive attacks upon the enemy flanks, for exploitation of the breakthrough, and for action against the enemy rear. Great operative mobility will be demanded of it. This brings up the questions of the training of horse cavalry personnel, quality of horses, and the intelligent utilization of marching possibilities.

If one studies the actions of German cavalry corps of Marwitz and Richthofen, of Karnakov's cavalry unit in the breakthrough at Swieciany, the French cavalry corps of Sordet, and of the march of Soviet First Cavalry Army from the Northern Caucasus to the Polish Front (1920), it will be found that the distance covered in 24 hours during these operations amounted to 40 to 63 miles. During the operations in Western Ukraine and Western Byelo-Russia (1939), and in Bessarabia and Northern Buckovina (1940), the Red Army's cavalry divisions accomplished 43 to 63 mile marches in 24 hours. Finally, most instructive are the operations of a German cavalry division on the French front in June, 1940. During the period of 16 to 23 June this division covered 225 miles, including time spent in engagements.

These examples concern large units—division and higher—and do not take into consideration the burden of maintaining security. It is known that security units (reconnaissance and march security), consisting usually of up to one-fourth of the main cavalry forces, will as a rule, proceed off the roads. Therefore, if the 24-hour march of a unit is 37 to 40 miles, then the security units will cover a distance 20 to 30% greater, i.e., 45 to 53 miles.

Red Army cavalry manuals agree with this. The normal march of a cavalry unit is determined to be 28 to 34 miles in 24 hours, and the forced march at 47 miles (in individual instances up to 62 miles). For security units these norms are correspondingly raised: the normal march, 37-43 miles; forced march, 60-62 miles (at times 75-81 miles).

The conclusion is clear. The personnel and animals of cavalry units must be trained to execute forced marches of 47 miles.

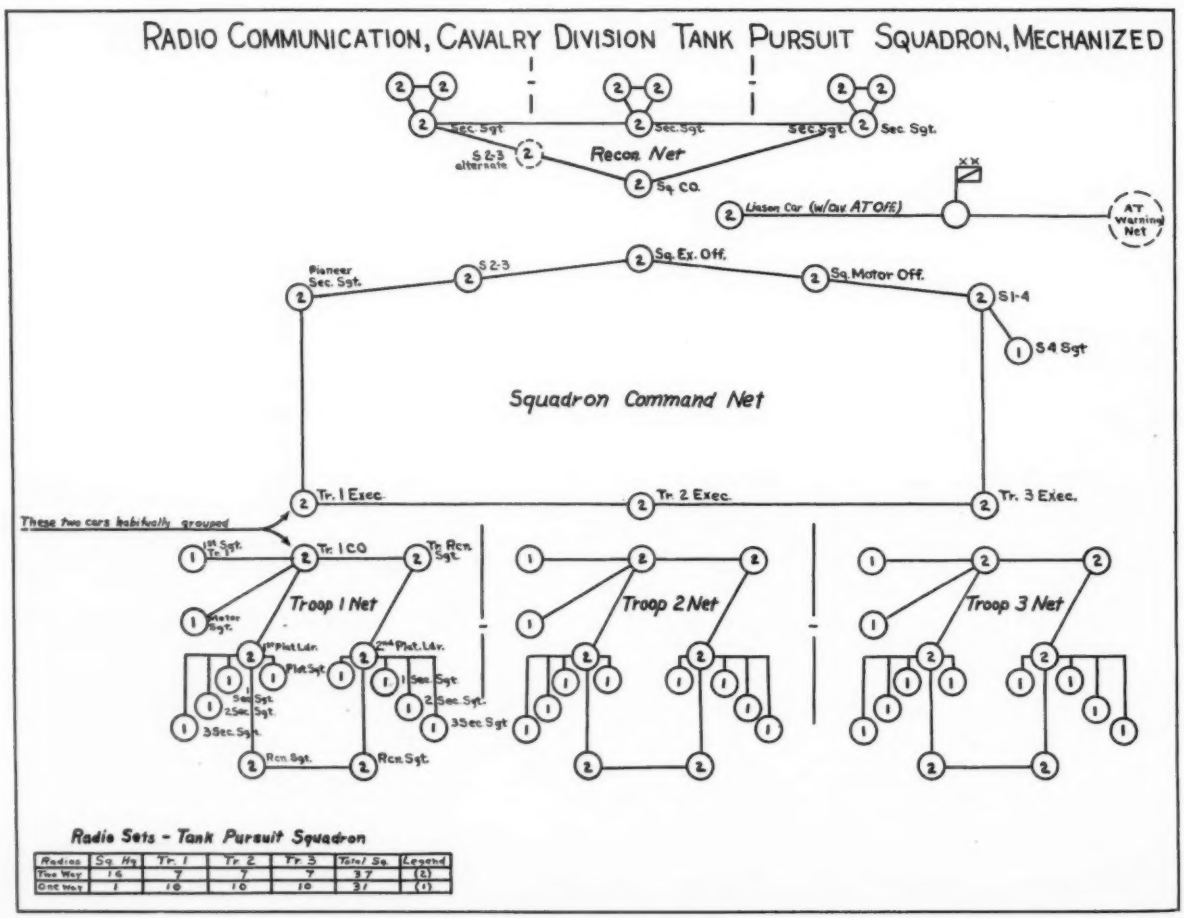
*"Marshevaya podgotovka konnitsy," by Colonel M. Moiseyev-Cherkasskiy. Translated from the Russian by Lieutenant Joseph Dasher, ORC, from *Krasnaya Zvyezda*, 2 October, 1940.

1st Cavalry Division Tank Pursuit Squadron

By Major Don Carleton, Cavalry

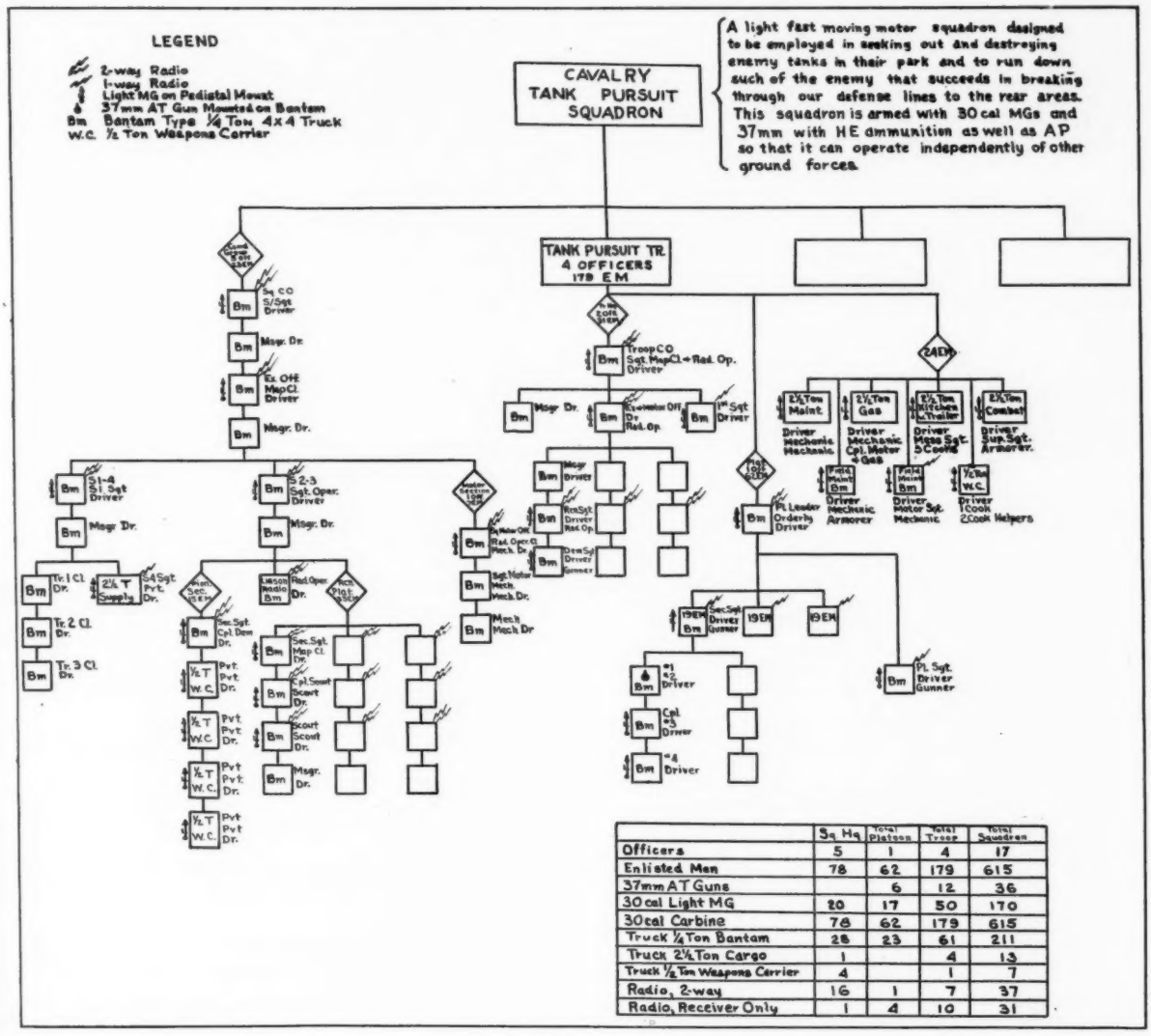
Organization

THE 1st Cavalry Division Tank Pursuit Squadron (provisional) was organized just prior to the Louisiana maneuvers. Because of the reports of the war in Europe, which illustrated the failure of static defense against mechanized attack, this squadron was conceived with the idea of finding armored forces in their motor parks, and in route column, and by making full use of surprise and maneuver, to the flanks and rear, to break up and confuse armored force attacks. Experiments were being conducted by the War Department at this time on an Organization known as the "Tank Destroyer Battalion." The proposed Tables of Organization for this unit indicated that it was to be a strong, heavily armed force capable of meeting and destroying a major mechanized attack. It was to have 75-mm. and 37-mm. guns mounted on heavy vehicles. Included in the organization was a certain percentage of Infantry and Engineers. As we visualized the problem, from the standpoint of the employment of the Cavalry Division, such an Organization appeared too heavy and unwieldy. Experiments were being conducted at Aberdeen with the standard ¼ ton truck mounting the 37-mm. gun and as firing tests seemed satisfactory, this appeared to be a practical solution to our problem. Accordingly, the "Tank Pursuit Squadron" was organized with 37-mm. guns mounted to fire forward on the center of the ¼ ton 4 x 4 truck. Each 37-mm. gun car was accompanied by two ammunition carrier cars; these cars each mounting a .30 caliber machine gun. Because of



Radios	Sq. Hq	Tr. 1	Tr. 2	Tr. 3	Total Sq.	Legend
Two Way	16	7	7	7	37	(2)
One Way	1	10	10	10	31	(1)

Chart 1


LEGEND
2-way Radio
1-way Radio
Light MG on Pedistal Mount
37mm AT Gun Mounted on Bantam
Bm Bantam Type ¼ Ton 4x4 Truck
W.C. ½ Ton Weapons Carrier
A light fast moving motor squadron designed to be employed in seeking out and destroying enemy tanks in their park and to run down such of the enemy that succeeds in breaking through our defense lines to the rear areas. This squadron is armed with 30 cal MGs and 37mm with HE ammunition as well as AP so that it can operate independently of other ground forces.
CAVALRY TANK PURSUIT SQUADRON
TANK PURSUIT TR. 4 OFFICERS 179 EM
24 EM
Sq C.O. S/Sgt. Driver
Msgr. Dr.
Ex. Off. Map Cl. Driver
Troop C.O. Sgt. Map Cl. Rad. Op. Driver
Excutive Off. Dr. Rad. Op.
1st Sgt. Driver
2½ Ton Maint.
2½ Ton Gas
2½ Ton Kitchen & Trailer
2½ Ton Combat
Driver Mechanic Mechanic
Driver Mechanic Cpl. Motor & Gas
Driver Mess Sgt. & Cooks
Driver Sup. Sgt. Armorer.
Field Maint.
Driver Mechanic Armorer
Driver Motor Sgt. Mechanic
½ Ton W.C.
Driver 1 Cook 2 Cook Helpers
Pl. Leader Orderly Driver
19 EM
Pl. Sgt. Driver Gunner
Cpl. ¼ Driver
Driver
Tr. 1 Cl. Dr.
Tr. 2 Cl. Dr.
Tr. 3 Cl. Dr.
2½ T Supply
S4 Sgt. Pvt. Dr.
S1-4 S1 Sgt. Driver
S2-3 Sgt. Oper. Driver
Sec. Sgt. Cpl. Dem. Dr.
Sec. Sgt. Map Cl. Dr.
Cpl. Scout Scout Dr.
Scout Scout Dr.
½ T W.C. Pvt. Pvt. Dr.
Msgr. Dr.
Mech. Mech. Dr.
Sgt. Motor Mech. Mech. Dr.
Rad. Op. Driver
Gunner

	Sq Hq	Total Platoon	Total Troop	Total Squadron
Officers	5	1	4	17
Enlisted Men	78	62	179	615
37mm AT Guns		6	12	36
30 cal Light MG	20	17	50	170
30 cal Carbine	78	62	179	615
Truck ¼ Ton Bantam	28	23	61	211
Truck 2½ Ton Cargo	1		4	13
Truck ½ Ton Weapons Carrier	4		1	7
Radio, 2-way	16	1	7	37
Radio, Receiver Only	1	4	10	31

Chart 2

the limited time available prior to the start of maneuvers, we had to be content with mounting dummy 37-mm. guns, instead of the real thing. However, these were built as realistic as possible and the tactical training received during maneuvers was equal in every way to what it would have been had we been able to mount the real 37-mm. gun.

To provide local reconnaissance, three detachments were organized as part of the Squadron Headquarters. Each detachment consisted of a Sergeant with a radio control car and three ¼ ton 4 x 4 trucks (bantams) carrying scouts. Normally, these sections operated directly under the squadron commander. However, when Troops were sent on special missions, a reconnaissance detachment was sent with them. These reconnaissance detachments proved invaluable; they were at work night and day throughout each exercise. They reconnoitered roads ahead of the squadron; located blown-out bridges, defiles, routes of march, and were able to give ample warning of the presence of the enemy in each situation.

The pioneer and demolition equipment carried by the squadron consisted of land mines, TNT, necessary tools, and most valuable of all, two bantams, in each 37-mm. gun section, carried a 10 foot section of two by ten inch plank. This equipment enabled each platoon of the squadron to destroy small bridges and establish effective road blocks; the ten inch planks were strong enough to carry the car and its load and enabled the platoons to cross drainage ditches, small streams, and swamps that would have been serious obstacles to other vehicles.

Communication was provided by SCR-245 radio sets, these during maneuvers, were mounted in scout cars. Voice radio for command was used throughout maneuvers, and the normal procedure, of writing and recording messages, was eliminated. Officers issuing or receiving orders did so personally by radio. Operators kept a briefed log of all messages sent and received. A

simple code system, known as the clock code, was used to designate places. Keypoints were designated prior to each maneuver phase and by giving a clock direction, with north as 12:00 o'clock, and the distance in miles, points on the ground were accurately located. With very little practice, this system was found to be very effective, even where there was a shortage of maps. Reconnaissance sections carried a simple list of the keypoints and could be directed from place to place without reference to the map. Enemy information was sent in the clear so as to avoid disclosing the keypoints. One serious handicap experienced during maneuvers was the fact that all our radios were mounted in scout cars and when it was necessary to leave roads in difficult country, radio scout cars had to be left behind. At such times, messenger communication proved efficient, however, it did slow down operations.

Methods of Combat

In order to release the Tank Pursuit Squadron for its aggressive mission, regiments in the division were provided with 37-mm. anti-tank guns, six to each weapons troop, as their organic defense against tanks. This organic defense in regiments enabled the troops of the Tank Pursuit Squadron to seek the flank and rear of an enemy mechanized force, rather than attempt to interpose itself in front of the attack. The platoon is considered the smallest combat element in the squadron. Platoons were directed to their combat positions by voice radio and once committed, would continue the action on their own until recalled, or given a new mission. At times, when radio scout cars had been left behind, platoon commanders were called to the command post and given their mission, or the squadron or troop commander might ride from one scene of action to the other. When contact with the enemy was made platoons were to move into action in a V formation. Gun squads echeloned to both flanks and rear of the base squad as they advanced to fire position. 37-mm. gun crews were taught to open fire at ranges not exceeding 500 yards. Whenever enemy targets came within that range, they were to fire one or two rounds and advance quickly to a new fire position. Platoons were to move by bounds at all times when under enemy fire or observation. The length of each bound was determinated by the next fire position and the degree with which the ground, over which the car had to move, could be seen by the driver. The V formation, with extended distance and intervals, enable gun squads to cover each other with both 37-mm. and machine gun fire, and also prevent their being out flanked during combat. Every effort was to be made to seek combat in woods, or the edge of woods, where these small cars with their camouflage would have every advantage over tanks. As each 37-mm. gun car moved forward to combat, it would be flanked on either side at 40 to 50 yards interval and distance by its ammunition cars, each mounting a machine gun to prevent surprise attack by dismounted troops.

This technique, of advancing by bounds, took considerable practice, however, once learned it rendered gun squads almost invisible during combat. Cars were camouflaged each day with branches. Moving at highest possible speed, these camouflaged cars were only an indistinct blur, and whenever they halted, they would blend into the background. It was planned to carry 20% high explosive ammunition with the 37-mm. gun, this to be used against enemy ground machine gun crews. With this combat formation, and armament, it was believed that the platoon had little fear of scattered Infantry attacks, and by bringing the fire of guns at short range on enemy tanks discovered, they hoped to make a good account of themselves against mechanization.

If there is any value in maneuvers, experiences in the Louisiana maneuvers definitely indicated that our tactical employment was logical and sound. We did not hope to be able to successfully resist a major tank attack where tanks were used in great numbers and in great depth. However, we did hope to be able to harass and delay such an attack, and where the enemy made "piece meal" efforts, or where tanks were used thinly on a wide front, to destroy them. We also hoped, and this proved true in the first phase of the Army maneuvers, to do great damage to enemy trains.

Maneuver Experiences

"Baker from Option, Baker from Option;: enemy tanks forming for attack at affirm dash ten point five dash five. Answer." "Option from Baker, Roger."

"Jig from Baker, Jig from Baker, move at once to Affirm dash ten dash three, gain contact, attack enemy right flank. Report on contact. Answer."

"Baker from Jig, Roger." (That calm quiet voice, our first contact, I wonder if they were all asleep?)

"Mike from Baker, Mike from Baker, move your section by road, edge of trees at Affirm dash nine point eight dash two and reconnoiter route to enemy rear. Answer." (That recon. section should not be far from there now.)

"OK, OK, Baker from Mike OK, on the way."

"George from Baker, 8 Jig George from Baker, you will follow Mike,; seek covered route to enemy right flank and rear. Attack. Do you understand? Answer."

"Baker from George, Roger on your message Sir, but what is Mikes location." (Why don't they listen to all messages.)

"George from Baker, Mike is moving North East from Affirm dash nine point eight dash two. He will reconnoiter in front of you. Answer."

"Baker from George, Roger." (There I have got them started.) Driver go across the field to those woods on that hill, maybe we can see something from there." (Think I'll put Troop One in those woods there to the

southeast where they will be handy if any of those people attempt to go around us.)

"8 Jig Dog, 8 Jig Dog from 8 Jig Baker, move to concealed position, woods at Affirm dash ten point five dash one point five. Reserve. Negat is attached to you, have him reconnoiter to the east. Answer."

"Keep to the high ground, driver. For the love of Mike don't get us stuck now."

"Baker from Dog, Baker from Dog, Roger."

(This is slow going. We ought to be able to see Troop Three from that hill if we could ever get there. Say look at that Artillery? They look half asleep. Maybe they don't know what's up.) "Driver, drive over near that Officer."

"Say Captain, enemy tanks are about two miles to the northeast heading this way."

"OK, OK, Get going driver, I want to see this thing."

"Baker from Jig, Baker* Baker* Baker from Jig, Enemy tanks within range Sir, we have knocked out four of them, no six of them, six of them have stopped and the umpire has taken their colors. I can see more behind. Yes, there are several more behind moving to our right. Answer." (Boy, there is nothing calm about Jig now.)

"Jig from Baker, Jig from Baker, (maybe I don't have to repeat that, he's only a mile away but it does calm you down so that you can think what you want to say) OK, OK, you're doing good, put in the balance of your troop and give 'em Hell."

"Roger, Baker from Jig, Roger."

"Baker from George, Baker, Baker from George, Have located enemy tanks moving to the southwest toward the town. We seem to be on their flank and rear. My gun sections are going forward as fast as they can and will be in range to attack in just a minute. Come in, Answer."

"George from Baker, Roger, Roger, get on their tail and give them the works." (There doesn't seem to be very many of them. If they go into the town Troop One can catch them in the side streets.)

"Baker from George, we have knocked out four of these tanks Sir, and about eight or ten have gone southwest toward the town, we are after them. Answer."

"Roger,–George,–Roger, Dog from Baker, Dog from Baker, Move out at once and catch enemy moving into town. Get in side streets on enemy rear, Answer."

"Baker from Dog, Roger."

"Driver get down to the road and head for Pitkin as fast as you can." (It should be good there as they will not be able to turn around in the narrow streets)

"Baker from Dog, Baker from Dog, Caught tanks in town. They are halted and we came up on their rear. The umpires are making the decision now." (Sure enough there they are, what a break! Twenty-nine tanks in almost that many minutes. There are eight getting away though, I'll send Donnell down that east road and try and cut them off.

Maneuver Experiences No. 2

Crossing of the Sabine 18 September 1941.

"Gentlemen, here is a message from the Army Commander, "The 1st Cavalry Division will cross to the east bank of the river tonight and at daylight tomorrow will attack the enemy in flank and rear." The point of crossing for each of your units is shown on the marked map I have just given you, now get going! That is all."

That classic order was received by all Brigade and separate unit commanders late in the afternoon of the 18 September. As the squadron commander, Tank Pursuit Squadron was speeding northwest, he sent the following radio, "Baker from Negat, Baker from Negat, Prepare to move in twenty minutes, trains remain present location, Jig attached Bradford, tell Berg report to him at once at 84 dash 3 dash 4. The balance of the outfit will report to me at 86 dash 3 dash 6. Bring all truck covers. Do you understand? Come in."

"Negat from Baker, Is this correct? Jig to Bradford at 84 dash 3 dash 4, we move at once to 86 dash 3 dash 6 and bring truck covers. Answer."

"Baker from Negat, That is correct, that is all."

At Mike's Ferry Lieutenant Arnold of the 7th was holding the west bank with a few scout cars and one or two Jeeps. He said that the river was fordable both north and south of the ferry with difficulty because it was shoulder deep and had about a five mile current, but the worst of it was that the enemy held the east bank in considerable force, also that they, the enemy, had the ferry boat on their side. But when he heard that most of the Tank Pursuit Squadron was coming up he was all for forcing a crossing at once. However, any crossing made at this point would obviously be no secret and would no doubt meet with strong delaying forces that would hamper the squadron movements tomorrow. So Arnold was asked to make a great show of crossing till well after dark and then to fade into the night and join the Squadron at the point of crossing of the 2nd Brigade farther south. Moving back to the rendezvous 6 miles east of Shelbyville the Squadron Commander found that his Squadron had arrived and here all heavy vehicles were left in charge of the motor officer, their personnel moved into the messenger Jeeps.

Six miles to the south, through forest as black as death and over a road so bumpy that at times it seemed certain that the cars must be moving across country and not on a road.

"Can you see the road, driver?"

"No Sir."

"Well how do you know you are on one then?"

"I am following that faint streak of sky there."

It was a fact. The driver was looking up, the sky was just a shade lighter than the trees on each side of the road and he was driving at that narrow slit, twenty miles an hour, and behind as far as one could see the little blue pin points of the black-out lights of the Squadron were following.

The 7th and 8th had crossed and the Artillery was just moving up to the river. There was just room for the bantams to ease by the Artillery to the river bank. The truck covers were brought forward, and now as a fine illustration of the value of careful preparation it was found that there were only four of the covers without holes which made them less than useless as boats. No one had ever seen bantams floated in canvas wraps before, but one Sergeant said that he had seen a movie of it, so he was put in charge of the wrapping crew and and the work commenced. One man, who had been brought up on the river and who knew all its tricks, was put to guiding each one across as it was wrapped. Some close calls served to keep the men alert to the job in hand.

Very soon it became evident that the troops were in for an all night job, only nine or ten cars could be crossed in an hour, so it was doubtful whether or not they could be finished by daylight. About this time a voice came from the blackness of the river bank, "Need any help?" It was the Division engineer and behind him came a triple width foot bridge.

From here on the job was a cinch. The foot bridge crawled steadily across the stream, it was a bit too short, but with the help of a couple of assault boats and some planks it was stretched to the far bank just at daylight.

Farther down the river Troop 3 was crossing in two places. They had no engineer foot bridge and had to depend on ingenuity and imagination to devise ways and means. At one point, due to the inventiveness of an Artillery Officer with a flair for doing the impossible, the cable from the winch of a truck was strung over on a tripod of trees cut near at hand and anchored to the far bank. The cars were hung on pullies to this cable and scooted across at the rate of one every three minutes. At another point a staff officer, who had played Huck Finn in his youth, made a raft by lashing gasoline drums to poles and the cars were floated across on these without difficulty.

The only really remarkable thing about the crossing of the Sabine that night, was that at no point along that dark river could be heard the remark, "This is going to be a hell of a job." or "This can't be done." The Division was to attack the towns Noble and Zwolle, ten miles east of the river, early the next morning and it didn't seem to occur to anyone to dwell seriously on the intermediate problem.

Daylight 19 September 41 the Tank Pursuit Squadron (less Troop 3) moving east from the river. Colonel Brown, Commanding 2nd Brigade, had said the Brigade would attack the town of Noble and the Pursuit Squadron would protect the left and north flank. Accordingly the Squadron moved northeast planning to cut the Highway 171 north of Noble and assist the 2nd Brigade. About two miles east of the river what appeared to be a strong enemy outpost was encountered.

One platoon through the woods to the right, one to the left, the advance guard platoon attacks to the front, and under the fire of eighteen 37's firing HE and AP ammunition and 36 machine guns, a detachment of two enemy half tracks, one scout car, several motorcycles, and thirty-five men were declared "hors de combat" in short order. They shouldn't have been bunched that way; they were encountered all in a heap.

The plan was to cut 171 in three places as indicated by the road junctions between Noble and Converse. Troop I encountered an enemy detachment about three miles west of Noble. Lost one gun car there, poked their nose over the hill without looking. It was a good lesson for the survivors however, as they took an enemy scout car and twelve motorcycles a few minutes later.

Highway 171; and it was heavy with traffic. Vehicles of all descriptions moving south, heavy trucks, gasoline tankers, heavy maintenance trucks with their big cranes sticking out the back, scout cars, motorcycles, and what not.

The platoons attack! Smoke screens—heavy firing—lots of confusion—two enemy scout cars dash across a field through a fence and into a ditch. It was a good thing those heavy wreckers were there. Some delay for a decision, and Highway 171 is clear.

Assembled, the Squadron moved north toward Converse, however, the reconnaissance detachment reported that the bridge east of Converse was blown out, otherwise the town was empty.

"Move south, attack town of Noble down 171."

Reversing the column was only a matter of seconds. Individual cars turn about as platoon and Troop Commanders race to their new posts.

Point bantam came racing back. He shouts and gestures to the point commander in passing.

"Enemy truck-train coming this way just around the bend. Twelve trucks no protection."

"OK, lets go." Twelve trucks, five officers, and forty-five men. A Quartermaster Railhead train. Someone overhears something about a railhead at Marshall.

"Skip it. This train is destroyed." More important work to do at Noble.

The Squadron moved on, but is halted at the bridge two miles north of Noble. The bridge is blown out. But wait, the Umpire examines the bridge and finds that only a five foot section has been blown out at one end. Out comes those ten foot planks and on they go.

As the point approached the edge of town it observed an enemy half track and a small force dismounted. They, the enemy, seemed to be so astonished at their presence that they failed to open fire and the point was able to take a very satisfactory fire position. The Squadron (less point) then moved down a dirt trail to the right and attacked the town from the northwest. The 81-mm. Mortar Platoon of the 2nd Brigade, that had attached itself to the Squadron that morning at the river crossing, was put in action to support the attack.

Heavy firing again! Bantams scooting through the woods! Close contact with the enemy! They appeared to be tank crews and others, hastily assembled, with

tommy guns. The machine guns would have made short work of this situation.

The Umpires forced the enemy to withdraw, but the delay had killed all the advantages of surprise.

About four miles to the south a great fleet of friendly attack air planes were seen swooping and diving at something there. Napoleon once said, "March on the sound of guns." Today the Squadron marched toward the swooping attack planes.

It entered Zwolle from the west, the Squadron Commander having gone forward to the 2nd Brigade CP met the Division Anti-Tank Officer.

"What's the score here?"

"Well, the Division has occupied the town. The CP is down there by the railroad station. Troop 3 has gun sections in position covering the approaches from the east and one section on 171 north of town. The town was held by enemy cavalry this morning, but they were driven to the east."

"That sounds great, but my guess is that all hell is going to break out here in about five minutes. We'll leave one platoon to cover this road and be in reserve, the balance of the outfit to the north edge of town prepared to attack any enemy that shows up."

As the bantams were scooting up side streets to position, two enemy tanks had already slipped through the northern defences. One tank rounded a corner and stared stupidly at a 75-mm. Howitzer, in action, in the middle of a busy street intersection. The artillery gunner came to life and pulled the string and the tank was definitely out of action and needed no umpire to tell it so. North of town artillery was in position sighted for point-blank fire, with beautiful open fields before it, anti-tank guns of the regiments were with the artillery increasing the depth of the position. When the platoons of the Tank Pursuit Squadron arrived they took position in the woods on the left from which they could launch a counter attack.

Then, as in answer to the prophesy, all hell did break out.

Cannons booming, men running to position, the cackel of machine gun fire, the roar of tanks everywhere, the smart crack of rifle, smoke clouds over everything, and the unholy scream of diving air planes. Umpires running to and fro waving their little white flags and screaming into the thunder.

Silence: A bugle call. The war was over.

Who won? Who knows? Things like that are not discussed in high places, this was a maneuver and the troops were here to learn—not to win.

But every man in a certain cavalry division knew who won. It was that big fellow who banged the table with his crop and roared, "Get the lead out of your tails and get going."

Conclusions

It may be wrong to draw conclusions from maneuvers where umpires and flags take the place of bullets. However it is only fair to assume, that if a unit is capable of overcoming the terrain in very difficult country, it will be able to repeat the performance in war.

When the squadron was organized, the Commanding General of 1st Cavalry Division had no idea of trying to prove that the ¼ ton truck or Jeep was the ideal mount for the 37-mm. A-T gun, nor did he contend that the 37-mm. is the best anti-tank gun. However the Louisiana maneuvers offered the first opportunity to test the theories of the tactical employment of an anti-tank unit equipped with light self propelled A-T guns.

On this basis the following conclusions were reached:

1. In modern war, where mechanized units are likely to be encountered, such an anti-tank squadron is almost indespensable to a cavalry division.

2. The unit should be light enough and flexible enough, to cover the front and flanks of the horse units even when they move across country.

3. That the most successful anti-tank operations, within the zone of action of the division, were those where we attacked and destroyed enemy tanks at some distance, before they could close with other elements of the division.

4. That it is not practical to equip a cavalry division to withstand a major tank attack. The cavalry division should always be assigned missions that permit enough freedom of action to allow it to make full use of existing natural obstacles and with its antitank weapons to delay the enemy advances long enough to permit heavy tank destroyer battalions to be brought into action.

5. Because it is not practical to have enough A-T squadrons in a division to meet all possible contingencies each regiment and brigade should be equipped with antitank guns for organic defense.

6. That organic tank defense guns with regiments and brigades be normally left with their units, for the defense of that unit, and not sent off on attack missions.

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DEADLINE DATE NEXT ISSUE, JANUARY 5th

According to Plan

By Lieutenant John N. Hutchison, Infantry*

"EVERYTHING is proceeding according to plan." So does Hitler describe the advances of his panzer divisions that, until Russia resisted, moved with clock-like precision in the marches of conquest.

Now officers of the Second Armored Division, commanded by Major General George S. Patton, Jr., are congratulating themselves that their lightning-war unit showed in the most difficult problem of recent Third Army maneuvers that it can operate on schedule against obstacles and circumstances that would have made an impossible situation for any but an armored division.

The division fought its way bodily through the enemy without losing an important unit. It sent three columns over widely spaced and difficult routes. The three columns, actually almost surrounded by enemy, met on the dot at a pre-arranged point 40 miles from their starting place, and crossed the Red River on a ponton bridge exactly on the minute set a full day before.

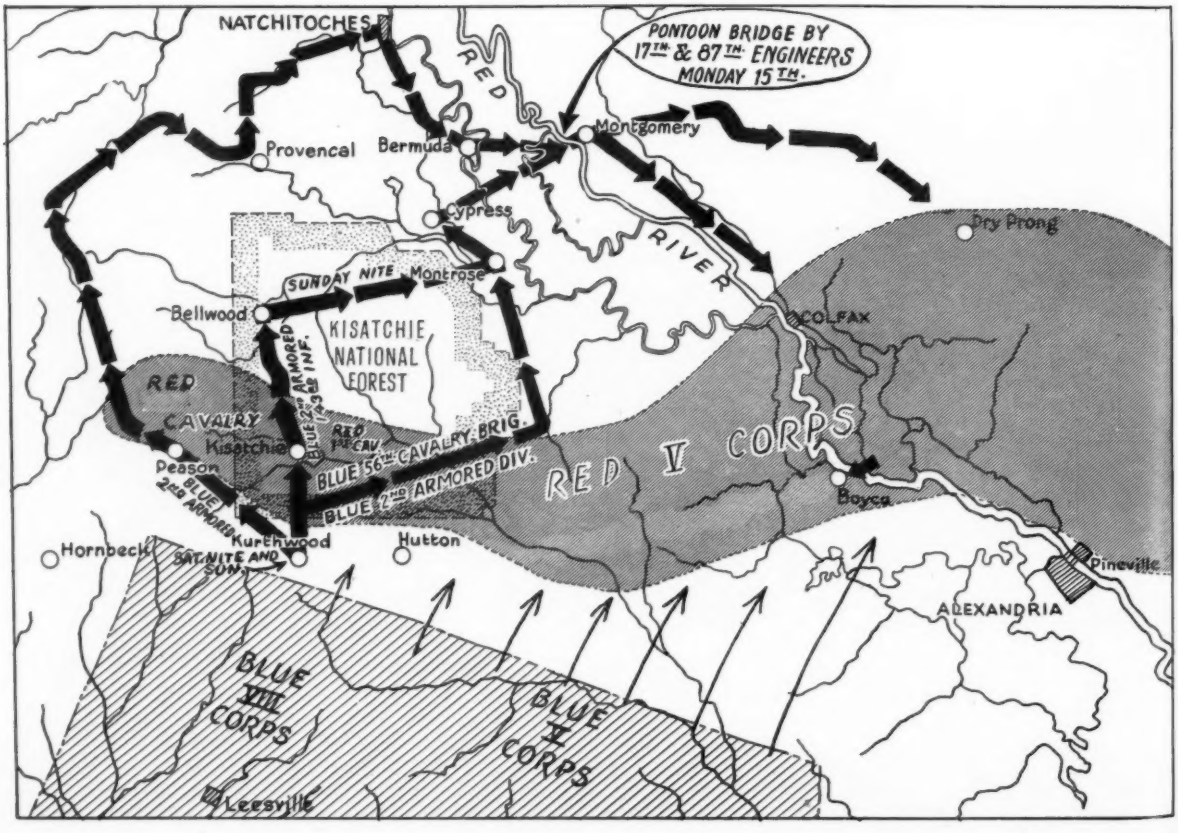
*Assistant Public Relations Officer, 2d Armored Division.

The Second Armored—most-maneuvered armored division in the nation—had never conducted an exercise that "clicked" so perfectly.

The problem began with the Red Fourth Corps crossing the Red River westward in the vicinity of Boyce, La. (see map) and establishing itself strongly. The Blue Fifth and Eighth Corps moved northeastward to press them back in a frontal attack, while the 56th Cavalry Brigade and the Second Armored Division faced the Red First Cavalry Division.

On the first day in which the Second Armored was in the fight, it attacked the cavalry with one column while it drove a second steel spear between the cavalry and the Fourth Corps. On the following morning, Lieutenant General Walter Krueger declared a week-end armistice, with the Second Armored Division then in the neighborhood of Kurthwood and Kisatchie. (See map.)

At sundown Sunday night the battle was resumed. For a time, there was great confusion on both sides, since the sudden suspension of hostilities the day before



had left Reds facing Blues at virtual arm's reach, and neither could draw back far enough to take a swing at the other when the fighting opened again.

But the snarls were finally untangled and the battle took on a saner aspect. The 67th Armored Regiment engaged the First Cavalry Division. While the tanks occupied the horsemen the rest of the Second Armored, in two columns, drove through. Hundreds of tanks, armored cars, trucks, "peeps" and motorcycles growled northward through Kisatchie National Forest, a desolate waste of fire-blackened stumps and twisting sloughs—some of the toughest country in the world for operations of armored vehicles.

All through the night the two columns toiled northward. Each column was a complete army in miniature, with tanks, artillery, armored infantry, and a motorized combat team from the 143d Infantry—a team for which the Second Armored had great respect during the difficult problem.

It was dawn on Monday when the first elements of the division stood on the banks of the Red and looked across the brown current to the east. They had come 40 miles under blackout in a hell of terrible bogs, mud-weltered vehicles, and roads that didn't show on the map.

A lieutenant from the 82nd Reconnaissance Battalion swam the river to investigate the other bank and to awaken the man who operates the ferry to Montgomery. (See map.)

That ferry, and one improvised by the 17th Engineers from two assault boats and some duckboards, took the first vehicles over. Up came more assault boats, then, and the 17th's experimental rubber boats, to carry the 41st Infantry of the Second Armored, and the attached 143rd across. Guns of the 14th Field Artillery Regiment went into position along the bank to protect the crossing.

On the western shore the infantry waited for the assault boats as the British must have waited on the beach of Dunkirk.

The huge 25-ton heavy pontons of the 87th Engineer Battalion, attached to the division, were rumbling in behind their tractors. At noon, the 87th, aided by the 17th, began to throw the great web across the water. The division order said the bridge would be ready at 9 o'clock that night.

At 8:58 the bridge was done.

At 9:01 the division started rolling across the Red. All night long the great parade went on, with the combat teams swiftly organizing on the east bank to strike southward against the rear installations of the enemy, now trapped astride the Red to the south.

Until noon the next day the long steel column rolled in almost uninterrupted flood across the bridge. By that time the umpires could see that the Reds were in hopeless encirclement, with tanks plunging through rear areas and the Fifth and Eighth Corps pressing relentlessly from the south.

Last combat unit to cross the bridge was the 67th Armored Regiment. It had fought off the Red cavalry for almost two days, keeping it away from the Second Armored flank. And finally the 67th pulled away from the cavalry, rushed north and escaped across the bridge to join the parent force.

Time-table operations, they are called in Europe. In Louisiana, the armored division proved that it can plan as audaciously and split seconds as neatly as the High Command of a foreign army.

Use of the Armored Force

*By Lieutenant Martin Philipsborn, Jr.**

WM. L. SHIRER often quotes the remark made to him by an Austrian general after the Battle of France, in 1940. The general remarked that "the German success, taking the historic view, was due to the fact that we were then living in one of those brief periods of history in which offensive weapons had obtained complete mastery over defensive weapons." The remark was only partially true; but had the general added the words "in the hands of the defenders" no exception could have been taken. In any case the brief period to which he referred is now drawing to a close, as the Russian war so surely indicates. From this fact we must learn not to lean too heavily on the German tactics of 1940, the reasons for the success of which have already passed.

In order that the truth of this statement be apparent, it may not be amiss to review the causes of the overwhelming success of the German armored divisions in the campaigns of Flanders and of France. Of the important factors surprise was certainly not the least. The surprise was not surprise of place (General Gamelin had a very good idea of where the main German effort would be made as early as January, 1940), but surprise of method. The German method, for our purposes can be divided into two parts—the "fundamentals of method," which includes the organization of the forces used, their equipment, training and tactics: and "method of employment" which includes a study of the manner in which the forces were used. It is the purpose of this article to show that while German "Fundamentals of Method" will repay study, the lessons learned from the German method of employing these forces in France are now probably outmoded. We can learn much from the German organization of forces, the "Einheit" idea, the splendid coördination of all branches by a superior system of communications. But the tactical successes of the German campaign in France were based on conditions which already no longer exist.

II

That German methods will still succeed against a poorly equipped foe is apparent from the Jugo-Slavian and Greek campaigns. That they are doomed to failure against a well equipped and resolute opponent seems equally apparent from the lack of immediate German success in Russia. It would appear, indeed, that upon one single factor depends the ability of an Armored Force, using German tactics, to go on to a swift and immediately smashing victory. That one factor is *uncontested* superiority in the air. Where such superiority is unattainable, as in Russia and Libya, German blitz tactics have failed immediately to achieve their objective. When, as at present, such near-parity in the air is coupled with the lessons drawn from the German blitz campaigns, it is apparent even to the Germans themselves that the methods of employment of 1940 are no longer possible. Let, then, the Armored Forces of the United States think for themselves.

III

How, then, may the Armored Force be used? In answering this question there are certain definite negative propositions which aid in reaching a conclusion. First of all, it should *not* be used piecemeal, as was done in the Louisiana maneuvers. Its infantry should not be sent here, or a battery of its artillery there and a battalion of its tanks elsewhere. This work can be done better and more quickly by regular line regiments of the arm sought. And more cheaply too. An armored division is essentially a term to play a certain type of game: it should be used for no other. If a few tanks are needed for ancillary purposes, the G.H.Q. tank battalions are always at the disposal of the commanding officer.

Nor should the Armored Force be used defensively for that is not its game either. An example of what should not be done is again found in the Louisiana maneuvers when the First Armored Division was ordered to a tactical attack in order to make an immediate strategic defense. Armored forces, to be employed in a manner most suitable, must be used offensively from the strategic as well as the tactical point of view. Other troops will do the defensive work quite as well.

Last, it is improbable that the Armored Forces can be employed as the Germans employed their Armored Divisions in France for the reasons above stated. Such forces could have been used that way at but one particular moment in history, now (happily) passed.

From the above it would seem that the use to which an armored division can be put is strictly limited. In a sense this is true. Days and months, perhaps even a year, may go by without an army being able to call upon its armored forces for action. And yet, in addition to its usual tasks of exploiting a breakthrough, or, as in France, effecting one, there is still another rôle the tanks should play.

It is perhaps too bad that today so little attention is paid to the military history of the American Civil War, and that so few officers are made to study Henderson's *Life of Stonewall Jackson*. For here is found an ideal use to which a powerful mobile armored division may be put. Let it be remembered that maneuver, as well as attack, can divert from the main theater of operations a great number of men. Maneuver can weaken an opponent, by forcing him to make detachments from his

*13th Armored Regiment (L).

1—Light tank platoon from the 1st Armored Division advancing with observers out and using the woods in the background to dim the tank silhouettes. 2—Tanks in action in Louisiana maneuvers. 3—Plane from the 12th Observation Squadron attached to the 1st Armored Division sweeping over two light tanks of the Division. 4—Medium tank of the 1st Armored Division overcoming a log wall obstacle. 5—1st Armored Division engineers ferrying a scout car over a deep stream. 6—New M-3, 30-ton medium tanks of the 69th Armored Regiment are loaded on the latest type interlocking tread ponton ferry laid down by the 16th Engineer Battalion. The 69th and 16th are units of the First Armored Division from Fort Knox, Ky.

main force, to such an extent that this force itself can be overwhelmed. Jackson saved Richmond by threatening Washington and forcing detachments from McClellan's main body and forcing him to use his reserves for a purpose for which they were never intended. Jackson didn't have to fight: it was all done by maneuver. Here, then, is an ideal rôle for the Armored Force. It can, and should, by sweeping flank movements, comparable only to the cavalry raids of other days, force detachments from the enemy's main body. Strategically the raids must be made where, should the enemy refuse to uncover, the action can be pressed home to the disruption of enemy communications and supply. In the event that the enemy does uncover, the armored raiders should either destroy the detachment if not made in adequate force, or by its superior mobility and its initiating action, rejoin its main body to overwhelm the enemy, minus the strong force necessarily detached. Such immobilization by maneuver is the very essence of sound military science, and a task for which the Armored Forces (now that a frontal attack to effect a breakthrough is no longer practicable), are admirably suited.

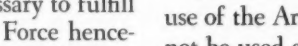
IV

It is obvious from the above that any force used in the manner described must be highly mobile. Our Armored Forces are not mobile enough. The impediments carried by an armored division throughout the Louisiana maneuvers would have horrified Napoleon. Post exchanges, and barbers: adding machines, Ditto machines, multigraph machines: wall tents, pyramidal tents, large fly tents: bedding rolls, sleeping bags, cots, generating machines, motion picture projectors. All of this has no place in warfare and should have no place in maneuvers. To achieve the mobility necessary to fulfill the rôle this writer believes the Armored Force henceforth will play, it is essential that its fighting elements operate from base camps where everything but the necessities for actual combat may be left. There the Personnel Section should remain, there should be found the kitchen trucks, the Post Office and all maintenance vehicles unable to share in combat. There the trains must be left, guarded, if necessary, *not* by fighting vehicles of the Force, as is the custom at present, but by troops unable to undertake the work for which the Armored Force is designed. These base camps themselves should be as mobile, and as comfortable, as possible: a home to which the fighting components may look to returning after combat. To maintain the fighting elements in complete self-sufficiency at every step of the way is neither possible nor desirable.

Lastly, and of primary importance, is the question of communications. Today our Armored Forces are restricted tactically and strategically by the limitations of our communication system. For this, in a country which has exploited commercial radio to the extent we have, there is no excuse. Immediate improvement in communications is imperative. In order to carry out the tasks above described a voice radio is necessary which will permit communication between *all* elements of the division. Action will be so rapid that there should be no time, nor necessity, for coded communications. The only transmission of code should be between the operating forces and Army General Headquarters. In the smaller units, a battalion commander should be able to converse with all vehicles in his command, and each company and platoon commander should be able to do likewise. Only in this way can a raiding operation achieve the cohesion and promptness of maneuver necessary for success. To insure such promptness as well as for *MORALE* purposes, it is essential that every maneuver problem be permitted to come to a conclusion rather than be terminated by a theoretical solution.

V

This article is but one opinion regarding the future use of the Armored Force. It seems obvious that it cannot be used as the Germans used it in France. It must be used in some other way. This is one suggestion. There should be others: lots of them—to the end that the Armored Forces of the United States be as surprising and as successful as the Panzer divisions of Adolph Hitler's Third Reich.



Maxims

"Always mystify, mislead, and surprise the enemy, if possible; and when you strike and overcome him, never give up the pursuit as long as your men have strength to follow; for an army routed, if hotly pursued becomes panic-stricken, and can then be destroyed by half their number.

The other rule is, never fight against heavy odds, if by any possible maneuvering you can hurl your own force on only a part, and that the weakest part, of your enemy and crush it. Such tactics will win every time, and a small army may thus destroy a large one in detail, and repeated victory will make it invincible."—*General Thomas J. (Stonewall) Jackson.*

The 6th Cavalry, Maneuvers in Louisiana

*By Captain John F. Franklin, Jr., Cavalry**

AT dusk on the 4th of September, the 6th Cavalry completed a movement from the "Little Bohemia" area to a rather close and confined bivouac on Highway 71, some five miles below Alexandria, La. This area into which the Regiment was squeezed measured only 500 yards on a side. However, since an advance reconnaissance detachment, consisting of personnel from each organization, had preceded the Regiment here, and were waiting to guide the units into their specified places, the entire column moved into the plot through a very small gate without halting a single individual vehicle until it had reached its parking space. Such a movement is seldom witnessed. Having completed this, the Regiment expected to settle down, establish an outpost, feed, and reconnoiter the area. Only the preliminaries of this were completed when an order was received from IV Army Corps at 7:00 PM. Our RED Third Army would complete its mobilization in northeast Louisiana by 20 September. IV Army Corps, reinforced, was to advance and secure crossings of the Calcasieu River between Slagle and Hineston inclusive. The 6th Cavalry was given the very broad mission of covering the left flank of the Corps by aggressive reconnaissance to the south and southeast, and by harassing action on the flanks of any hostile threat. One motorized battalion of infantry from the 31st Division was attached to the 6th Cavalry, an item that the Regimental Commander had requested numerous times before with no success until now.

To accomplish this mission, the Regimental Commander, Colonel John A. Considine, without the slightest delay ordered the Motorcycle Troop to send three platoons south on the following routes: State Highway 5, U. S. Highway 71, and U. S. Highway 165 to establish contact and delay as much as possible until relieved by elements of the scout-car troops. The motorcycle troop was used initially in this case because it was after dark, and the sacrifice of the motorcycles, if necessary, in making contact in darkness was preferable to sacrificing the scout cars.

Troop E (one section P & D, attached) was ordered to move in its zone extending from Highway 71 exclusive of State Highway 278 inclusive.

Troop F (less one platoon—one section P & D, attached) was ordered to move in its zone extending from the Red River to U. S. Highway 71 inclusive.

Two phase lines were designated; first, one running from Bijou to Cheneyville to Hineston, and, second, one running generally parallel to the first and ten miles father south. The troops were to report their arrival at each phase line, and proceed therefrom upon Regimental order only. Upon reaching the first phase line, where the troop sectors became more narrow, thus "pinching out" some elements, each troop was instructed to release one platoon to regimental control.

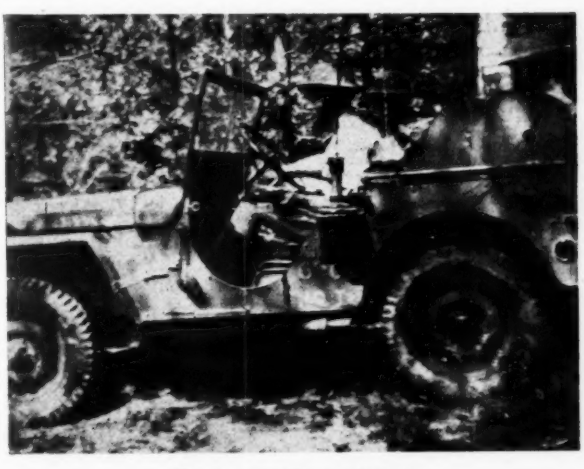
In general, both troops were to contact elements of motorcycle troop, relieve this troop, gain contact with and delay any enemy forces by harassing action and demolitions judiciously placed.

The Regiment, less above elements, remained in reserve at Inglewood, and the attached Infantry remained in readiness in the vicinity of Anandale.

However, a radio bantam patrol was ordered out at this time to go south on U. S. Highway 71 and down State Highway 26 to point of contact.

Upon reaching the contact area, the radio bantam patrol was to leave main roads and filter in behind the hostile troops to a specified area designated by orders received over his radio from the Regimental Commander.

It is interesting at this point to go into the details of equipment, crew, and mission of this bantam. First and most important, by an ingenious arrangement, a 12-volt battery substituted for the standard battery, thus allowing the installation of a SCR 245 radio set on the bantam. Other items include a small set of air-ground panels, five days of rations, three sub-machine guns, two land mines, one five-gallon can of gasoline, and a 2½-gallon can on each fender, one containing oil, and the



Bantam, radio equipped

*Faculty, The Cavalry School, Fort Riley, Kansas.

other gasoline. The crew consists of one officer, a driver, and a radio operator. Their general mission is to get in rear of enemy positions, near the rear installations, hide, observe, and report their findings to Regiment by radio. If distances become sufficiently great, relay radio stations are established to maintain communications. Friendly air observation may direct the bantams into areas needing close observation. The bantam thus equipped and employed proved its worth on numerous occasions throughout the maneuver. The Regiment keeps four such bantams equipped and ready for detail on five minutes notice. Because they hide deep behind enemy lines ready to report any large movement, armored for example, the 6th has dubbed them "Squealers."

About ten the first night of this phase a report was received that hostile BLUE mechanized cavalry was active in the rear of our position at Inglewood or in and around Alexandria. The report seemed so preposterous that the Regimental Commander in person, with a force consisting of a section of scout cars, a few solo motorcycles, and two tractor-trailers loaded with 30 men each, proceeded to Alexandria to clear up the situation. In short order the hostile cavalry, including a platoon of scout cars and a tractor-trailer loaded with men only, were overtaken. In this particular encounter, the action was so close that ejected shells from the rifles of the hostile cavalrymen hit the Regimental Commander in the back—putting a very realistic touch to the entire situation. The probability of this BLUE cavalry force equipped with a large 11 ton tractor-trailer accomplishing any mission at all behind enemy lines was demonstrated to be reckless indeed and served no military purpose.

As the first night wore on, information from the mechanized elements out on the line was very meager. The static was so bad that no messages at all were received from the right scout car troop, for some four hours, not even motorcycle messengers—an inexcusable error on the part of that troop and a matter which was brought to their very vivid attention by the Regimental Commander at a later date. About midnight, though, information began to come in and revealed that there was a considerable enemy threat pushing north on U. S. Highway 165, just below Woodworth. In fact, the threat became so strong that the Regimental Commander at 1:10 AM committed his attached Infantry Battalion. Although this battalion had their own transportation, it was some two and a half hours before they were in position at Woodworth, the delay resulting from the fact that breakfast was served prior to complying with the order.

At daylight, the Sixth Cavalry with the Third Battalion of the 156th Infantry and a battery of 75's were disposed over a front of 23 miles covering the crossing of elements of the IV Army Corps over the Red River and defensive preparations to meet the northward plunge of the BLUE (hostile), Third Army. The Sixth as reinforced was to bear the brunt of the advance of a whole army corps.

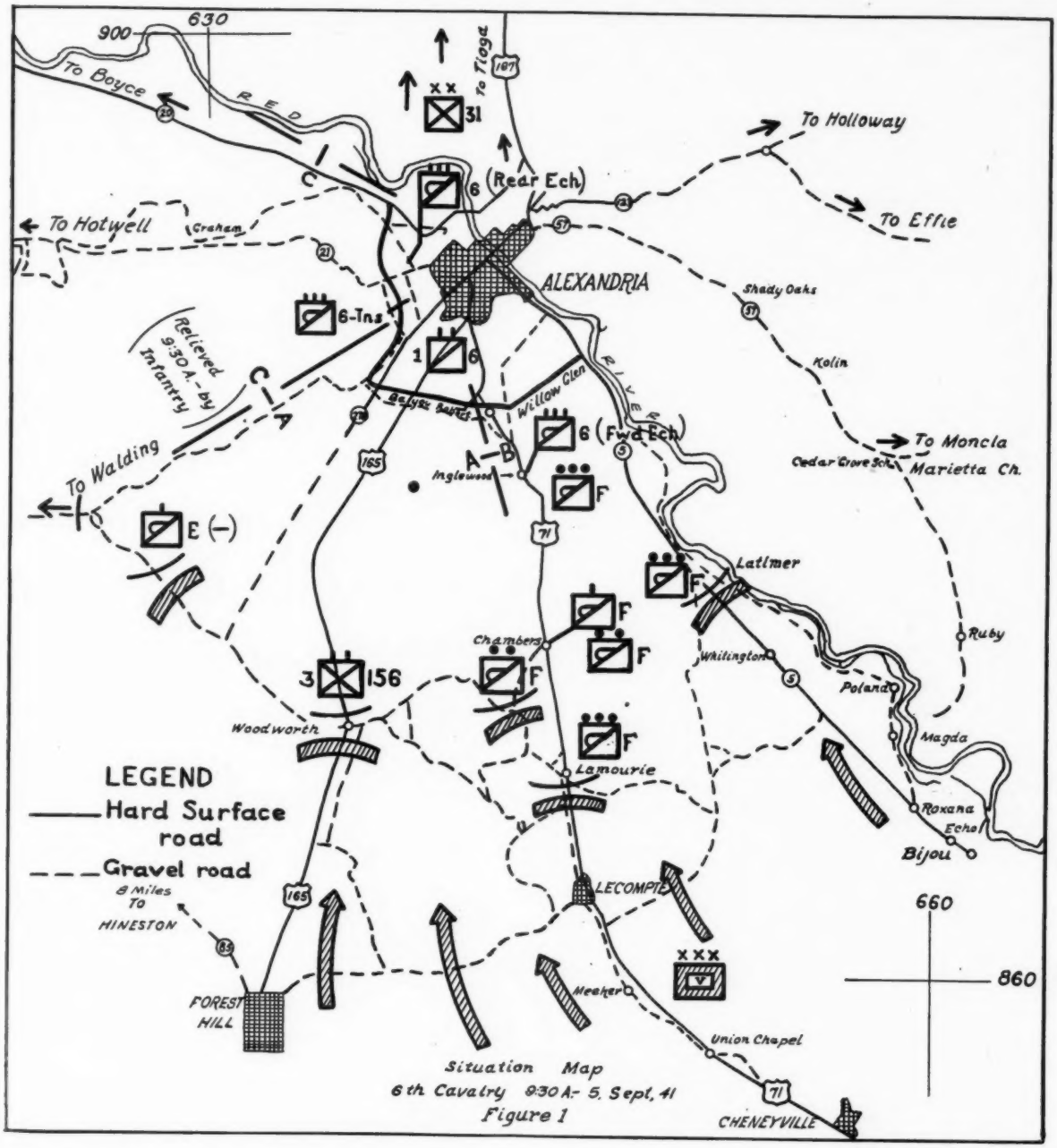
The fight opened at daylight. By a judicious use of demolitions, stubborn infantry fighting, cavalry harassing attacks, and long range machine gun fire, this Army Corps was practically stopped in its tracks, as it only gained about three miles in one sector. This was not vital.

About 6:00 AM on this same morning of September 5, Colonel Considine received instructions from IV Army Corps to establish a line along the Bayou Robert from Willow Glen to State Highway 278, and along Bayou Robert to State Highway 21 and Bayou Rapides to State Highway 20. The horse squadron was still intact with the Regiment less the 2d Squadron. By this time the mechanized troops had been forced back to the line Latimer, Lamourie, Woodworth. The motorcycle troop had completed its mission and had withdrawn into reserve.

Therefore, to comply with this latest mission, the Regiment, less the two reconnaissance troops and Regimental command group, moved out from the bivouac at Inglewood towards Alexandria at 7:00 AM. Troop C in portée led the order of march with the trains, and Troops A and B in portée following in that order. Small resistance was met, and quickly removed in vicinity Willow Glen. The column continued; the trains halted along a gravel road with CP of the rear echelon on State Highway 21 one-half mile west of Alexandria. The 1st Squadron, with Troop C on the right, Troop C in the middle, and Troop B on the left, went into position on the prescribed line south and west of Alexandria. Satisfactory parking space under some cover was found for the large tractor-trailers behind the line and northwest of Alexandria.

Therefore, at 9:30 AM on 5 September, the 6th Cavalry was disposed with the two scout car troops and one battalion infantry holding under pressure on State Highway 5, U. S. Highway 71 and 165, at Latimer, Lamourie, and Woodworth respectively, facing generally south, the trains under cover west of Alexandria and the 1st Squadron on a horseshoe line covering the west, southwest and south of Alexandria. The Regimental CP, forward echelon, was in operation at Inglewood, and CP, rear echelon, one-half mile west of Alexandria on Highway 21. (*See Figure 1.*)

During the remainder of this day with the forward echelon at Inglewood, the action was mainly delaying and harassing attacks. As our RED Infantry retired, the cavalry covered their flanks and delayed or harassed the hostile infantry columns along U. S. Highway 165. To the east astride Highways 71 and 5, the cavalry delayed by fire and demolitions. The enemy was dominated, and only got forward little by little. Demolitions and mine fields (actual) stopped all truck movements, and the "doughs" had to hoof it. An aerial reconnaissance of the front, intrusted to the 6th Cavalry, was performed by the Regimental Commander in person, and revealed on



Situation Map
6th Cavalry 9:30 A.- 5 Sept, 41
Figure 1

all main highways leading north toward Alexandria long columns of trucks, bumper to bumper, from 5 to 15 miles in depth. Thus this hostile Army Corps was held out of artillery range of Alexandria until dark, and the 6th accomplished its first mission.

Back with the horse squadron around Alexandria about noon of this day, it became very evident that it was useless to leave Troop C in position, since the Infantry was moving into that sector. Therefore, Troop C was placed in reserve, and held near the rear echelon CP. Likewise one scout car troop, having been in action on U. S. Highway 165 and State Highway 278, was relieved by the Infantry and placed in reserve with the rear echelon.

Instructions were received about 1:00 PM to send one platoon of scout cars to the RED 31st Infantry Division CP to become a part of the RED tank defense force. Many attempts were made to determine the location of this CP with no success until a Regimental staff officer managed to find his way into the home of two fair young ladies, whose husbands were in the maneuver area somewhere, and secured use of their telephone. Immediate contact was made with IV Army Corps by this commercial phone, and exceptionally important in-

structions were received direct. Ice water was served by the ladies. G-3, IV Army Corps ordered the Regiment to exert maximum effort to stop the progress of a hostile force, about the size of a brigade, on State Highway 278, moving toward Alexandria and only four miles out of the city limits. The 6th was to hold, at least, until the RED 31st Division had cleared Alexandria. The Regimental Executive, in command at the rear echelon CP, immediately committed all combat troops available to him, consisting of Troop C and two platoons of Troop E (Mech). IV Army Corps sent two heavy weapons companies into the position to reinforce the cavalry. Immediately a report was received from the horse squadron that a hostile brigade of infantry was pushing vigorously northeast toward Alexandria at the point previously reported. He indicated that he could hold them until relieved by the Infantry.

The problem now arose of moving the trains and the tractor-trailers from this danger area to the specified bivouac area near Hotwell. This appeared quite difficult since the roads were jammed with either troops, trains, or both, and there was strong possibility of being cut off. However, the movement was initiated at 5:00 PM and completed at 6:30 PM, covering a distance of 17 miles, and going into a strange bivouac that the advance reconnaissance detachment could not recommend as suitable.

Obviously this move dispersed the Regiment to a maximum extent. Troop F was still executing delaying action south of Alexandria on U. S. Highway 71 and State Highway 5. The horse squadron was still in position just south and west of Alexandria. The Regiment, less these elements, was in bivouac vicinity, Hotwell, south of Boyce by 6:30 PM. Therefore, the very difficult problem of breaking contact with the enemy, and assembling these elements at one very obscure, totally unknown place in darkness, presented itself to the Regimental Commander. Orders were issued for all units to assemble at Hotwell prior to daylight. The mechanized elements were to withdraw via State Highway 20 through Alexandria, and the horse squadron was to come across country from south of Alexandria. The execution of the job, of course, was up to the units themselves. Starting at 9:30 PM, the 2d Squadron less Troop E, which had come in with the trains, broke contact, withdrew through Alexandria, contacted their kitchen, fed supper, and reached the bivouac at 11:00 PM. The 1st Squadron likewise withdrew from contact, leaving the Infantry in position, contacted their trains, fed, and marched to bivouac, reaching there at 2:30 AM. At 3:00 AM, therefore, the 6th Cavalry was assembled as a unit in one place, prepared for another mission which came in short order.

At 4:15 AM, Colonel Considine received information from Corps that a hostile tank force was in bivouac in an area 4 miles southeast of Zimmerman Camp. The IV Army Corps was in a desperate position. All troops of the Corps, except the 6th Cavalry which had overnight extricated itself from contact at various scattered areas and assembled at one place, had been committed. Therefore, the IV Army Corps ordered the 6th Cavalry, operating from vicinity of Wilda post office, to block this threat from the west and southwest.

The Regimental Commander, just before daylight, issued an oral order in substance as follows:

P & D platoon was to establish mine fields and prepare all crossings of Bayou Jean for destruction. (*See Figure* 2.)

G Troop (less one platoon) was to furnish rifle and machine gun (on ground mounts from scout cars) protection for the mine fields.

F Troop (plus one platoon Troop G) was to establish two mine fields and conduct reconnaissance to a specified line.

Antitank platoon in the vicinity of RJ, east of Collins School, was to be prepared for movement and fire to the southwest and north.

The 1st Squadron and Troop E were to remain in present bivouac, prepared to move on five minutes notice.

Drivers of administrative vehicles were to be prepared to place their vehicles in roads in front of approaching tanks and thus impede traffic. If necessary, they were to ram tanks and cause them to stop.

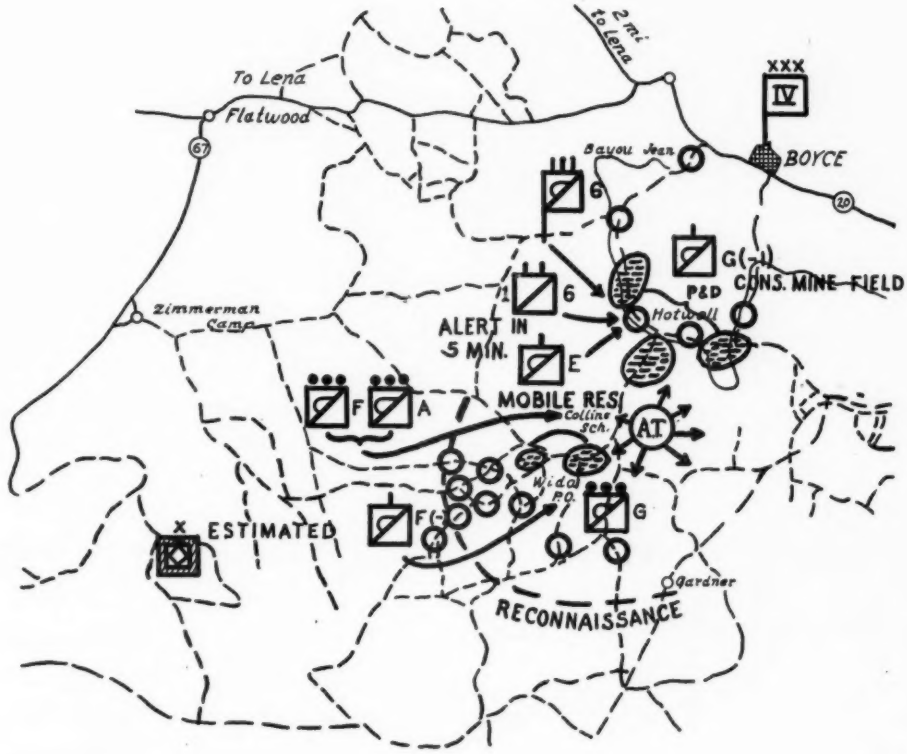
These orders were complied with immediately—in fact, the P & D platoon was leaving bivouac area before the entire order had been issued.

The Commanding Officer, with his command group only, went forward to the road forks at Collins School. Soon after arrival there, reports from the scout cars out to the south revealed the presence of a hostile brigade of Infantry. The 1st Squadron was ordered to move from bivouac to vicinity Collins School at a gallop, immediately. Shortly after the squadron arrived, the Regimental Commander ordered it to contact the hostile columns and stop their movement by delaying and harassing action. The area was divided into two troop sectors; the occupation commenced at a gallop.

While this was taking place, sufficient information was received by voice from the scout car platoons for the Regimental Commander to determine the fact that this hostile force was a brigade, and that the enemy's main effort in this entire area was due north toward IV Army Corps CP at Boyce. This information was transmitted orally by voice over radio direct to G-2, IV Army Corps.

At 7:30 AM when the action appeared to be most interesting and intense, the first phase of the Corps vs Corps maneuver was terminated.

Information was received to the effect that in general all units would remain in their final locations, with no lateral movement, and that the second phase would proceed from that disposition of troops. The 6th Cavalry, however, moved administratively to a bivouac area near Lena on U. S. Highway 20 about nine miles out from Boyce.



LEGEND

Road Block And Demolition

Mine Field Covered By Rifle & M.G. Fire

All administrative vehicles alerted to block roads, prepared to crash if necessary (assumed) in event of armored attack.

Situation Map
6th Cavalry 4A.M. 6 Sept '41

Figure 2

2d Maneuver Phase

At the opening of the 2d phase at 7:00 PM on 7 September, the IV Army Corps field order put the 6th Cavalry in corps reserve vicinity Hotwell. The Regiment prepared to comply with this order when new orders were received by telephone from the Regimental Commander who was at Corps CP. On his recommendation, the entire Regiment was not put in reserve, but was disposed as follows:

The 6th Cavalry, Lena Detachment, (bivouac area between 1st and 2d phase of Corps vs Corps maneuver) was to consist of 1st Squadron plus Troop E under command of Regimental Executive and to be in corps reserve.

The 6th Cavalry, Cedar Grove Detachment, was to consist of 2d Squadron, less Troop E, plus Regimental Headquarters, and was to proceed to Cedar Grove at 7:00 PM under command of Colonel Considine. This detachment had the mission of determining and delaying any attempt of the enemy to cross the Red River from a point just below Alexandria at BM Rush, east, to include point opposite Red River school beyond Moncla. At precisely 7:00 PM the Cedar Grove Detachment, with absolute priority on its route of march,

Men in boats

moved out from the bivouac at Lena. It was necessary to break into a tank column, stop a Quartermaster Regiment coming onto the highway, and stop oncoming traffic in order to move this detachment of the 6th Cavalry on its route where priority had been given by Corps. The Detachment moved to Boyce, turned north, and halted four miles out of town in order for security elements to take their positions. A platoon of scout cars under command of Lieutenant Bowden passed head of column and proceeded rapidly to Moncla to cover a section of the river there, a most likely place for the enemy to cross the Red River within the Regimental zone. A platoon of motorcycles proceeded forward from here also with the mission of protecting the Regiment's right flank in passing Alexandria. Then the advance guard, consisting of one platoon motorcycles and one section scout cars, went into position, the main body under S-3 closed up, and the column moved out and was soon moving at 35 miles per hour.

Upon reaching Shady Oaks on State Highway 57, Colonel Considine halted his column, opened his CP in the "Little Bohemia" once more and proceeded to issue detailed orders for the complete patrol of the Red River. The means utilized to determine the intentions of the enemy on this river illustrate complete resourcefulness and initiative. Therefore, it seems that the method is worthy of some discussion in detail.

In general, demolitions were to be prepared by the P & D platoon to delay any successful crossing of the Red River from Alexandria to Moncla, as indicated in *Figure* 3. The advance guard was instructed to outpost Cedar Grove School, ten miles east of Alexandria, where the detachment would bivouac, and to send a squad of motorcycle to observe at Harris Ferry. See *Figure* 3.

The motorcycle platoon, originally the flank guard, was ordered to observe the Red River near Alexandria.

A bantam patrol or a "squealer" with Lieutenant Goodwin in command was sent to Marietta Church at the easternmost point to observe enemy activities.

Finally four canvas boat patrols were spotted along the river at the remaining vital points.

Before considering the location of these boat patrols, a description of their equipment and crew is worthy of note. The so-called boat is composed of a Government issue cot wrapped in a specially constructed canvas cover. This construction is discussed in detail in The Cavalry Journal for July-August, 1941. The crew of one boat consists of two men, generally either a non-commissioned officer and a private or an officer and a private. Paddles are easily procured, but the remainder of the equipment must be carried. Needless to say, the cots, when not actually in use as boats, are put to good use on the staff line, but must be available on call at any time such as this. They are carried with the baggage of Regimental Headquarters in the forward echelon.

In this instance the value of the boats was exploited to a maximum. The following crews were organized and dispatched as indicated: (See *Figure* 3 for location of crossings).

Designation	*Location*	*Crew*	*Equipment*
A	Alexandria	Lt. Wells 1 NCO 2 Pvts.	2 boats 1 AT scout car (w/radio)
B	Wise Landing	Lt. Swofford 1 NCO 2 Pvts.	2 boats 1 radio bantam 1 scout car w/o radio for transportation
C	Harris Landing	Lt. Satterfield 1 NCO 2 Pvts.	2 boats 1 AT scout car w/radio
D	Moncla	Lt. Scollin 1 NCO 2 Pvts.	2 boats 1 AT scout car (w/o radio but contact to be through scout car platoon at Moncla)

It is well worthy of note that each of the above details had a definite means of radio communication. The S-2 was made directly responsible for the distribution of this equipment, a difficult matter under the circumstances.

The general missions of these patrols was to procure identifications, and particularly to report any sign of

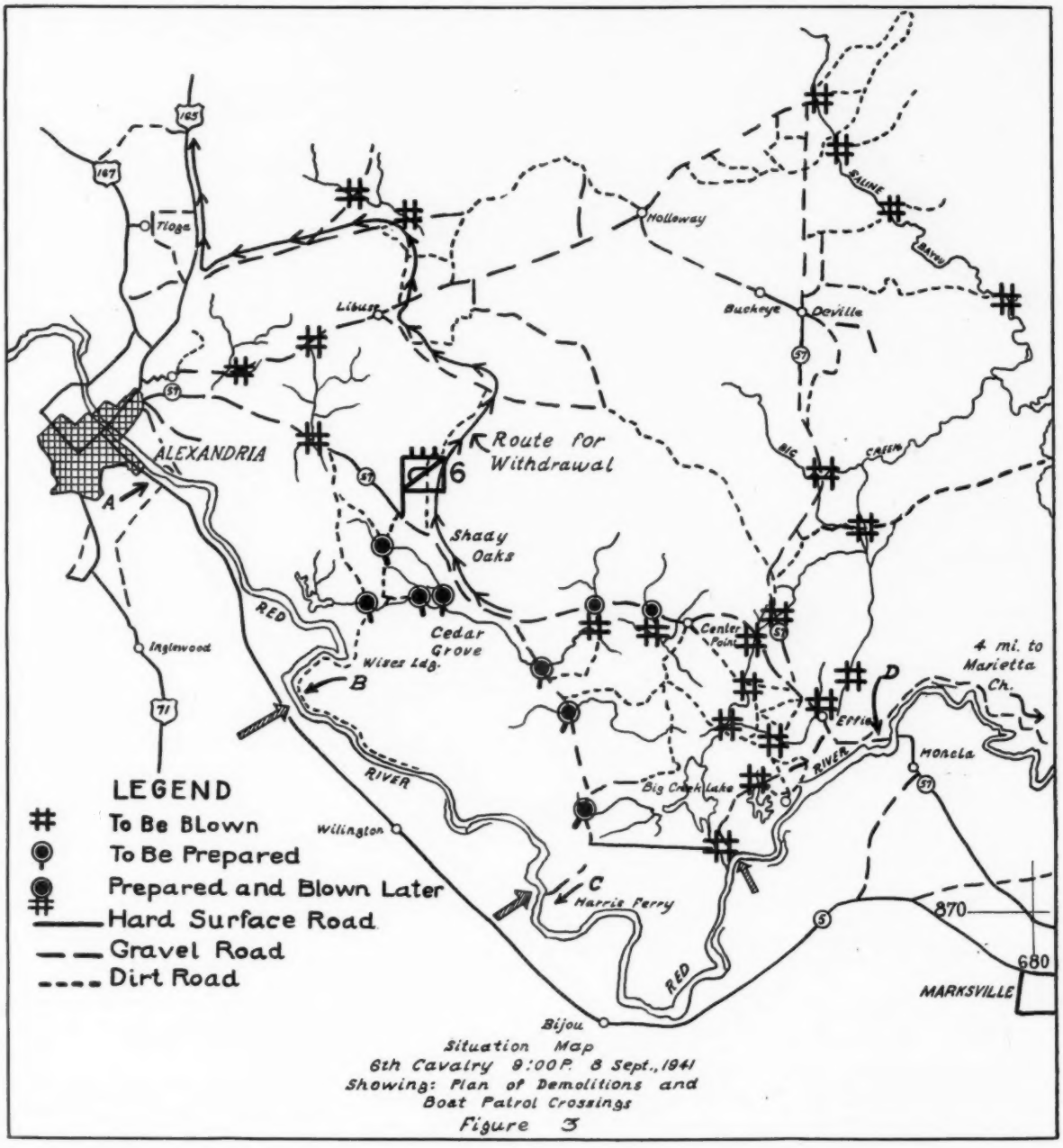


Figure 3

bridging material, any presence of assault boats, and any large movement of troops.

The officers were carefully instructed to cross in one boat with a man, and if no trouble was encountered, he was to signal his NCO by flashlight to follow in the second boat. Then the detail was to proceed under cover to the highway running parallel to the river, hide, and report any item of information. This task presented some difficulty due to the swiftness of the current, width of the river, and particularly the swampy country and very steep banks on both sides.

Having completed the disposition of these elements of the Regiment, Colonel Considine's detachment, less the advance guard and the boat crews, proceeded without lights six miles farther along State Highway 57 to Cedar Grove, where the usual guides were waiting to put the Regiment into bivouac.

Beginning at 12:00 midnight, the first boat patrol reported that he had crossed the Red River, and by 3:00 AM all four had reported in, each giving a negative report. At 1:00 AM the boat patrol at Wise's Landing reported an Infantry column in trucks with motorized artillery and trains moving southeast on State Highway 5. This was estimated to be not less than a reinforced

brigade, as it took 4 hours to pass a point. At 2:00 AM the Alexandria patrol reported that a platoon of hostile infantry was crossing to the north bank. Finally, during the early morning hours on the 7th, an enemy force, the size of a company, managed to make a crossing at Latimer Landing. Our force at Wise's Landing was immediately increased to a total of one platoon motorcycles and one section scout cars. This little detachment eventually managed to get in rear as well as in front of this small enemy force, capturing a goodly portion of them. No other action of any importance took place during the day except that a bridge on the Regiment's only route of withdrawal through its own demolition was physically repaired sufficiently to carry the trains. The Regimental Commander made a flight over the Red River in this area, and definitely determined and later reported to the Corps Commander that the enemy effort on this flank was only a feint. This was wholly verified that night when the enemy forces on our side of the river partially withdrew their outpost lines instead of showing aggressiveness to carry out the feint.

After darkness the Regiment moved to the vicinity of Shady Oaks, closer to the exit through the prepared demolitions, and remained there in comparative rest until 8:00 AM the morning of September 8, when the problem was terminated.

To Young Officers*

YOUR words will always be heard with respect by your subalterns if you support them with action and example; if you do not, these very words will bring your own faults into relief.

Do your duty for duty's sake, and not for the benefit it may bring to you, for that would be a debasement of your work. If you are given charges (or positions) that signify distinction or honor, let it be the results of the recognition of your merit, but never the result of a plan pursued with selfish efforts.

Guard jealously your prestige as a soldier; try to increase it constantly, for it is indispensable in the exercising of command.

The ambition to advance to the highest rung of the military hierachy is just and noble; the most important thing is not this, but your own worth and value at whatever rank you attain. Neither titles nor diplomas are proofs of professional capacity.

Study to increase your professional knowledge, but remember one commands more respect because of prestige rather than knowledge.

Take care to merit the high opinion of your subaltern, not through a cheap spirit of vanity, but because he is the one to whom you have to give orders, and if you are to succeed in this, he must have full confidence in your ability.

A soldier needs a lifetime to acquire prestige, but a second is sufficient in which to lose it.

Remember under all circumstances that you are wearing a uniform and not a suit of livery.

Never confuse subordination, which is the self-denying virtue of a soldier, with submission, the low state of the serf.

Be an airplane and gain altitude by your own forces and not a glider which rises only because it is towed.

Be even a Quixote in your acts; never a Sancho.

Do not stifle, in your subordinates, feelings of pride; on the contrary, encourage and direct them; if you do not, you will have lambs and not lions on the field of battle.

When you have a subordinate who seems to be ambitious, do not hinder him; study him and try to guide him; it is a force like that of a torrent, which builds or destroys; it all depends on how it is guided.

Without question the factor of chance has its effect in the outcome of an undertaking, but this factor intervenes the least, the greater the talent and foresight of the one charged with it.

Do not destroy the work that you find done, unless you replace it with something unquestionably superior.

Thinking over, solving and executing, must be the unbroken succession of phases of every military problem presented to you.

Fellowship in an army is the index of the moral solidarity of its officer group. This feeling is not based merely on the external manifestations of social character, but on something much more solid: mutual respect, esteem and consideration.

Confidence in oneself must be a characteristic of an officer, and must never be confused with a petulant self-worship.

The Argentinean officer has the fortune to possess in his own history the archtype of soldier, General San Martin. Even though to God alone is it given to concede the gift of equaling him in his military genius, it is within the range of our possibilities to resemble him, in the matter of his soldierly virtues.

*"Algunas palabras a los jóvenes Oficales," by General Abel Miranda. Translated from the Spanish by Mr. LaVergne Dale, Library, Command and General Staff School, from *Revista Militar*, February, 1941. Condensed by Colonel F. M. Barrows, *Field Artillery*.

AN IDEAL CAVALRY-Infantry Team

By Captain Bruce Palmer, Jr., 6th Cavalry

AS stated in maneuver directions, one of the primary objectives of the recent large scale maneuvers in Louisiana, was the moulding of the different arms and services into one well-knit team. A gratifying result of these field exercises was the emergence of a definite Cavalry-Infantry team, as demonstrated by various infantry units of the IV Army Corps and its Reconnaissance Regiment, the 6th Cavalry. This Cavalry-Infantry team is not new; it is centuries old. In a relative sense, the technique is new, having been developed since the advent of the armored reconnaissance vehicle.

There is one particular phase of this Cavalry-Infantry coöperation with which this article will primarily deal—that is, the coöperation between Cavalry Scout Cars, and other reconnaissance vehicles, and motorized, or partially motorized, infantry in an aggressive advance against retiring infantry attempting to get away rapidly. Cavalry can assist Infantry under such circumstances by carrying out a variety of important missions, including:

1. Furnishing route reconnaissance and assisting the infantry forward on previously reconnoitered routes.
2. Driving back or defeating hostile reconnaissance patrols and small security detachments which may unnecessarily slow up the advance of friendly infantry.
3. Reconnaissance and prompt report to forward infantry and artillery commanders of enemy resistance met which friendly cavalry cannot overcome. (Periodic negative reports when applicable.)
4. After friendly infantry makes contact with the enemy, continuous battle reconnaissance of hostile flanks and rear. Prompt exploitation by aggressive action of any "holes" found.
5. Supporting the infantry attack by fire from machine guns of scout cars in defiladed positions, or by dismounted guns.
6. In emergencies, transporting dismounted infantrymen to critical points where sorely needed.
7. Holding bridges, road centers, key terrain, or other critical points until relieved by friendly infantry and preventing the demolition of such critical points by vigorous surprise action against the enemy.
8. Maintaining liaison with flank Infantry and Cavalry units.
9. Aggressive reconnaissance, night and day, to maintain contact with the enemy in order to determine when he is making, or has made, a general withdrawal.

During the second phase of the Army vs. Army maneuvers in Louisiana in September, all of the above missions were successfully carried out with a resulting smooth Infantry-Cavalry combination. At the start of hostilities, the IV Army Corps was concentrated in the OBERLIN-DRY CREEK area with the 6th Cavalry in the vicinity of SUGARTOWN. During this field exercise, the IV Army Corps operated as an interior Corps, with the VIII Army Corps on its left and the V Army Corps on its right. The mission of the IV Army Corps at the start, 12:00 noon, 24 September, was to advance rapidly in its zone, seize the crossings of the Calcasieu River, and push on to the north. Colonel John A. Considine, Regimental Commander, 6th Cavalry, with the priority mission of reconnoitering the Corps zone and the secondary mission of covering the advance of the Corps, initially used his two scout car Troops, "E" and "F," to cover the Corps Front, with Troop "E" on the right and Troop "F" on the left.

The IV Army Corps advanced with two divisions abreast, the 31st Division on the right and the 38th Division on the left, the 43d Division remaining in Corps reserve. Initially, each forward infantry division employed a reinforced motorized infantry battalion to push forward aggressively in their respective division zones behind the cavalry screen. Generally, the division zones coincided with the reconnaissance zones of the two scout car troops. (See sketch No. 1.) In this discussion, I will deal with Troop "F," a reconnaissance (scout car) troop, and its coöperation with the forward elements of the 38th Division in the left zone of action.

On September 24th and 25th, the advance north in this left zone was hampered by well executed, but undefended, enemy demolitions. By hard work, a reinforced motorized battalion of the 152d Infantry (38th Division) was able to keep pressing forward in spite of demolitions. For the most part, the enemy faded away without fighting, although in several instances a company of infantry with machine guns and antitank guns made a temporary stand. Leading scout car patrols of Troop "F" got around blown bridges successfully and their prompt report of the enemy demolitions and situation to the front enabled the infantry to have engineers with the necessary materials repair the bridges without delay. During an attack on the 24th of September of the 152d Infantry against a delaying position south of the junction of Hy. No. 39 and Hy. No. 414, one platoon of scout cars found an obscure trail around the west flank of the enemy position which enabled them

to block the hostile rear and cause heavy casualties when the enemy withdrew. One noteworthy incident which occurred about this time was the coöperation and liaison established between a scout car platoon and a motorized battalion of the 180th Infantry, a regiment of the 45th Division from the adjacent VIII Army Corps. This unit of the 180th Infantry followed the 152d Infantry in its advance north from LEESVILLE on Hy. No. 39 on the afternoon of September 24th. Upon reaching the junction of Hy. No. 39 and Hy. No. 414, this battalion of the 180th Infantry was to advance to the west on ANACOCO via Hy. No. 414. A platoon of scout cars was sent to reconnoiter this route into the town. It surprised and captured small engineer detachments left to blow prepared demolitions on two successive bridges before the demolitions could be executed, thus assisting the advance of a friendly flank infantry unit.

The battalion of the 152d Infantry bivouacked on the night of the 24th of September about two miles south of KURTHWOOD, while Troop "F" pushed on into KISATCHIE and PEASON during the night. By dark, 25th September, friendly infantry had reached the vicinity of MT. CARMEL, while the scout car patrols pushed on to the line MANY-FT. JESSUP. During the advance, liaison was maintained with units of the VIII Army Corps on the left—namely, its Reconnaissance Regiment, the 113th Cavalry, and elements of the 90th Infantry Brigade. On the right, liaison was maintained with Troop "E," 6th Cavalry. Liason was also established with all three horse troops of the 6th Cavalry—Troop "B" in the area KURTHWOOD-KISATCHIE-PEASON, Troop "C" near HORNBECK, and Troop "A" neary MANY. It was difficult during this period to maintain contact with an enemy who blew the bridges in his zone but rarely defended them. However, on Hy. No. 171, contact was maintained with elements of the enemy 27th Division east of the highway from HORNBECK to MANY. During the advance, the Commanding Officer, 152d Infantry, well forward with his leading battalion, was kept informed of the situation to his front.

From the line MANY-FT. JESSUP to the north the only existing "hole" in the zone of the 38th Division was via FT. JESSUP. Early on the 26th September Troop "F" began its reconnaissance to the north through this "hole." From this point till the termination of hostilities on the afternoon of the 28th September, the action of these 6th Cavalry scout cars was to be closely associated with the advance north of the 149th Infantry, commanded by Colonel Wm. S. Taylor. The operations of the 149th Infantry were quite remarkable. For three days it was the spearhead of the attack of the IV Army Corps operating in the center of the III Army. At the conclusion of the field exercise, Colonel Taylor speaking of the coöperation between the Cavalry and Infantry made the following statement:

"It is my studied judgment that the use of armored scout cars in assisting the advance of motorized infantry is absolutely essential when time is the ruling factor. This Cavalry Screen is, in my opinion, necessary and such a combination will make a close approximation of the ideal Cavalry-Infantry Team. . . . From September 25th to September 28, 1941, the 149th Infantry advancing in its zone on FORT JESSUP, MARTHAVILLE, PLEASANT HILL, and MANSFIELD, respectively, had the assistance in this advance of the unit mentioned (Troop 'F,' 6th Cavalry—a scout car troop). . . . Their units (Scout Cars) were always to the front and flank and the action of this Regiment was materially assisted by them . . . *and furnished this Regiment information covering our flanks and to the front in a consistent flowing, uninterrupted stream.*"

General Roy W. Easley, Commanding General of the 75th Infantry Brigade (149th and 150th Infantry) of the 38th Division, made the following statement concerning the same operation:

"The rapid advance of the 75th Infantry Brigade from KISATCHIE to a point several miles north of MANSFIELD, LOUISIANA, in the second phase of the Army maneuvers on September 24th-28th was largely due to the efficient ground reconnaissance performed by the Scout Car Troop. (Troop 'F,' 6th Cav-

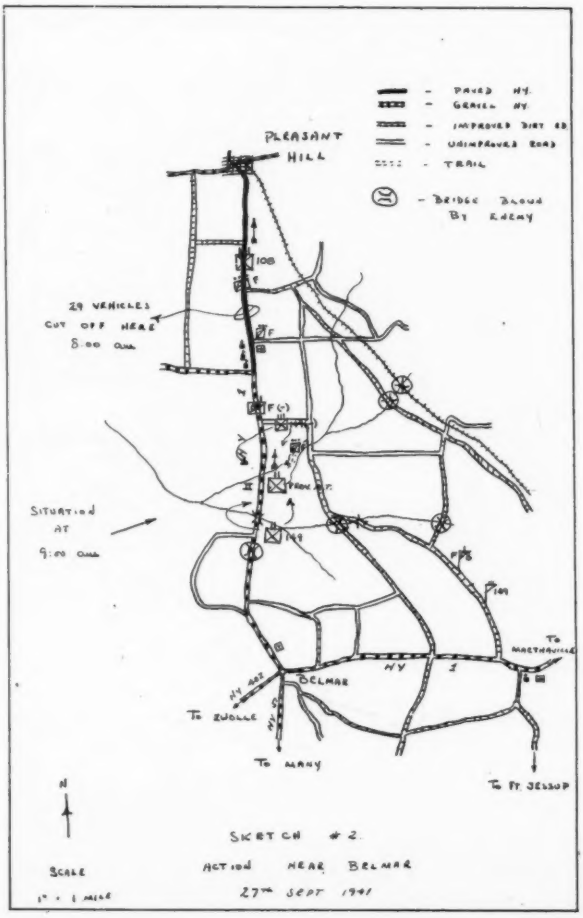
alry). Through this rapid and extensive reconnaissance, I was kept informed at all times of the presence or absence of hostile forces both to the front and flanks, and the location of units either on our right or on our left, thus enabling me to more expeditiously plan and execute movements of my brigade. . . . My plan of flank protection was facilitated and more efficiently planned by myself and staff due to the information furnished by this troop. At no time were the flanks of the 75th Brigade seriously threatened, even though at times the brigade was far in advance of other elements of the Corps. . . . *It is my earnest desire to again be afforded the opportunity of working with the Cavalry on similar missions, as I believe this type of training and coöperation between the two arms is of the utmost importance.* The Cavalry-Infantry Team as it functioned in these recent maneuvers is certainly a satisfactory and expeditious aid to rapid movement."

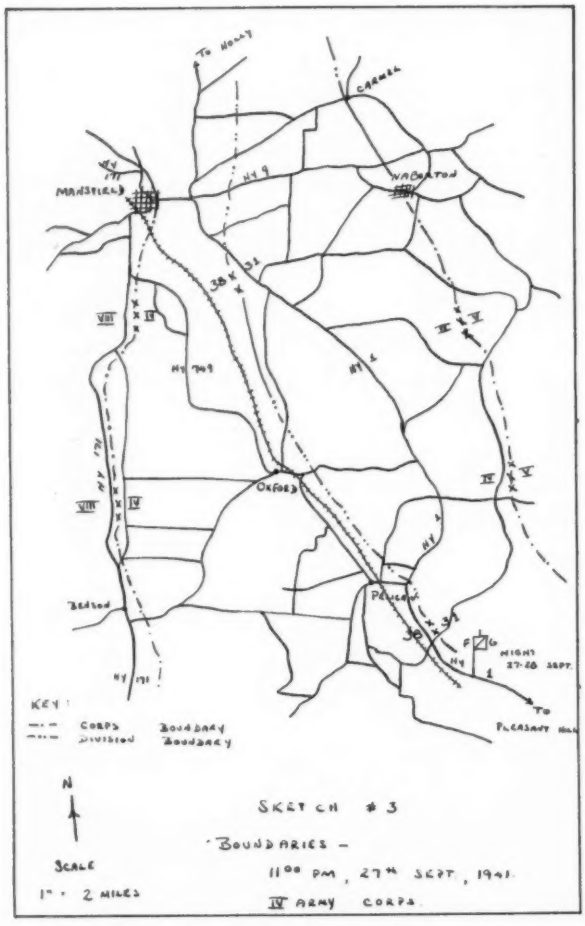
On the 26th of September, the advance north from FT. JESSUP towards Hy. No. 1 was delayed by poor roads made worse by rain and by hostile demolitions. No serious enemy resistance was met till Hy. No. 1 was reached. Here the road junction on Hy. No. 1 about four miles east of BELMAR was held by a strong detachment of the 35th Division Antitank Battalion and Company "E," 140th Infantry. The Scout Cars were stopped and friendly infantry was notified with the result that the leading battalion, the 3d Bn., 149th Infantry, attacked without delay. The attack, supported by scout cars and a horse patrol from Troop "A," 6th Cavalry which was reconnoitering in the same area, was successful. The 149th Infantry organized the position captured and after the rest of the Regiment had been brought forward went into bivouac for the night. Reconnaissance during the late evening and early hours of darkness revealed that the enemy had withdrawn to the north of MARTHAVILLE leaving all roads blocked by demolitions. BELMAR, however, was securely held all night. In the center of the zone of reconnaissance, an aggressive patrol captured a demolition crew on a bridge about eight miles northeast of BELMAR before the bridge could be blown. With the aid of this break, a "hole" to the north was found and by 11:00 PM contact was gained with a battalion of the 108th Infantry about four miles south of PLEASANT HILL. This was as close to the town as the patrols could get during the night. Information of the situation was periodically sent to the C.O., 149th Infantry by solo motorcycle messenger.

On the morning of the 27th of September, an incident occurred which thoroughly demonstrated the efficacy of "soft spots tactics," that is, the rapid and aggressive exploitation of soft spots in the enemy dispositions wherever found. At 6:00 AM, scout cars tried to get into BELMAR without success. At 6:50 AM, the enemy battalion of the 108th Infantry withdrew towards PLEASANT HILL, enabling the scout car platoon maintaining contact to secure control of a part of Hy. No. 1 south of town. Meanwhile, the bulk of Troop "F" moved north through the "soft spot" previously reconnoitered and, entering Hy. No. 1 at a point south of the patrol in contact with the enemy, blocked the rear of the enemy at BELMAR. About this time, part of this force withdrew and was trapped in a sector of Hy. No. 1, a total of 29 vehicles, including antitank guns and simulated scout cars, being captured.

At 7:30 AM one Bn., 149th Infantry, attacked BELMAR, the rest of the Regiment advancing along the route taken by Troop "F." About 8:00 AM the remaining enemy in BELMAR, which later proved to be a major part of the II Army Provisional Antitank group, began its withdrawal. Scout cars effectively blocked the head of the hostile column on Hy. No. 1 about five miles north of BELMAR, while other scout cars on unused trails harassed the east flank of the column. The enemy tried to fight its way out, but the 149th Infantry, moving swiftly, soon closed in on the enemy from all directions and captured them to a man. (See Sketch No. 2.)

By 12:30 PM the 149th Infantry had control of PLEASANT HILL, scout cars helping the infantry mop up the town and harassing small enemy motorized detachments of the 165th Infantry trying to get away.





About this time, liaison was made with the 152d Infantry of the left near MITCHELL, and with the 150th Infantry on the right about six miles east of PLEASANT HILL. Again the enemy in withdrawing made a thorough job of demolitions, but before long scout car patrols had located two "holes" and had gone through to the northwest. Information of these routes was furnished to the 149th and to the 150th Infantry. Northwest of PLEASANT HILL, small enemy detachments delayed the scout car advance but were driven back, till at 4:30 PM, 27th September, contact was gained with the enemy on the high ground about three miles southeast of PELICAN. Reconnaissance showed a natural defensive position held by a battalion of infantry supported by artillery. Attempts to out flank the position by vehicles were initially successful but bogged down in marshy ground. By 5:30 PM the attack of the leading battalion of the 149th Infantry had been stalemated. By dark a second Bn., 149th Infantry, with two batteries of 75-mm's in support, had been committed with no immediate results.

The 6th Cavalry scout cars maintained close contact with the enemy and at 9:30 PM discovered that the enemy was making a general withdrawal. All night long patrols, operating in the assigned zone, tried to get into PELICAN and to reconnoiter to the north and northwest of the town, but were stopped by demolitions and security detachments in the vicinity of PELICAN.

About midnight, orders from the III Army and the IV Army Corps for delivery to the leading elements of the 38th Division were received. *This liaison mission was completed by* 3:30 AM, *28th September*. During the night, orders changing the zone of the scout car Troop were received. Troop "F" was to cover the front of the IV Army Corps which had now become quite narrow. (See Sketch No. 3.)

At 5:30 AM, 28th September the 149th Infantry resumed its advance and by 7:00 AM had captured the junction of Hy. No. 1 and Hy. No. 749 just east of PELICAN. From here on, the 38th Division was to attack in the left half of the Corps zone, while the 31st Division was to attack in the right half. Two platoons, Troop "F," were assigned to reconnoiter the right half of the Corps zone covering the advance of leading elements of the 31st Division on Hy. No. 1, while the rest of the Troop, reconnoitering in the left half, covered the advance of leading elements of the 38th Division.

The advance to the northwest was rapid. By 7:45 AM, PELICAN was captured by the 149th Infantry. At 8:00 AM the 152nd Infantry had reached BENSON. By 8:45 AM, OXFORD was in the hands of the 149th Infantry. On Hy. No. 1, the aggressive action of a scout car platoon enabled the 124th Infantry (31st Division) advancing on that route to pinch off and capture a company of the 138th Infantry on Hy. No. 863 between OXFORD and Hy. No. 1. Bitter resistance was met on Hy. No. 749 about four miles southeast of MANSFIELD about 10:00 AM. It was not till 2:30 PM that the 149th Infantry was able to overcome the last ditch stubborn defense of the southern exits of MANSFIELD made by a hostile battalion of infantry with a battalion of field artillery. At 3:30 PM scout cars entered the town to the great confusion of fleeing enemy motor columns. Meanwhile, indications in the east half of the zone pointed to a withdrawal to the east towards the crossing of the RED RIVER at COUSHATTA. A message was received from Headquarters, 6th Cavalry, confirming this, by ordering the concentration of reconnaissance towards NABORTON.

When notification of the cessation of hostilities was received about 4:30 PM, 28th September, the 149th Infantry had consolidated its position in MANSFIELD and was advancing north on Hy. No. 145 towards HOLLY. The 152nd Infantry, leading the advance of the 76th Infantry Brigade of the 38th Division had entered MANSFIELD from the south. Leading elements of the 31st Division were pushing their attack on NABORTON. In the vicinity of MANSFIELD, the action had taken on the aspect of a pursuit, since the capture of the town in effect cut off hostile units still south of town on Hy. No. 171 and Hy. No. 1.

Concerning the action of the 28th of September in

this zone, General Easley, Commanding the 75th Infantry Brigade, said the following:

"The work of this troop (Scout Cars) in maintaining contact with hostile elements of the Second Army on our front when they began their withdrawal just south of PELICAN on the night of September 27th-28th was a big factor in our success the day of the 28th, at which time we advanced to a point two miles north of MANSFIELD, or a distance of approximately 18 miles, where the exercise ended."

In this maneuver, the IV Army Corps operated as an interior Corps with its flanks relatively secure. The 38th Division possessed no separate divisional reconnaissance unit of its own; the 31st Division did have a reconnaissance unit which it used to good advantage. It may seem, however, from this discussion, that under such circumstances, Corps Reconnaissance Regiment elements and Divisional Reconnaissance Units may mutually assist one another's efforts and actions.

There has never been any question as to the value of mechanized cavalry on distant reconnaissance missions. However, maneuver experiences and results also demonstrated the value of mechanized and motorized cavalry vehicles in the close contact phase. This was true even though these vehicles were operating in adverse terrain (bayou and swamp areas) in the performance of close and battle reconnaissance missions. These maneuvers in addition demonstrated the great value of mechanized cavalry to the Infantry Combat Team by assisting motorized and foot infantry forward in a rapidly moving situation.

107th Cavalry (H-M) in Louisiana: Horse elements reduced road-blocks so that motor elements could advance.

MECHANICAL COMPUTER For Demolition Charges*

By Captain David McCoach, III, Corps of Engineers

FOR many years, the theory of breaching by demolitions has been computed by a very learned formula involving a radius of rupture (R), a material factor (K), a placing factor (C), and a factor of ignorance (%). Placing these items together for any breaching problem, gives N (N the number of blocks of TNT) $= R^3KC \cdot + \%$.

To obtain the amount of TNT to destroy an object, it is necessary to cube some number, multiply it by another number taken from a material table, and multiply by C taken from an illustration, and depending upon whether the answer is more or less than a hundred blocks, add 10 or 25 per cent. Take for instance a 3-foot wall of dense concrete: K is found easily in the table of either 0.65 or 0.81; the chart in the manual gives 4.5 for a certain placing of the charge. Following to N, the answer is either 99 or 123 half-pound blocks of TNT. The solution is a simple and rapid calculation for a mathematician but not so rapid for men who have not had the background for such mental gymnastics.

A nomograph, which simplifies the computation of charges to some extent, is given in the demolition set and in the demolition manual. All that is needed for its use is a straight edge, a pin, a chart for K, an illustration for the method of placing, and two movements in the correct order. Of course, if the movements are performed out of order, the answer is definitely wrong. It is, however, very easy to do the two movements in the wrong order; also, a slight error in placing the pin on the index line gives a large error in the answer.

After patiently trying to teach demolition computation with the two methods offered in the field manual, it became apparent that a simpler method was essential to meet the requirements of modern combat engineers, since every squad now carries special demolition equipment and a small amount of explosive in the squad truck and every noncommissioned officer must be able to compute charges rapidly and accurately. A simple computer based on the principles of the slide rule was, therefore, conceived to do the computation of demolition problems in one operation; no slide rule computations were contemplated for craters since the Engineer Board has developed multiple charge craters using fixed depth and quantities of explosive to replace the old single-charge method.

Various charges were computed and plotted on a circular slide rule but discrepancies were noted throughout between the slide rule and the computed values of the various conditions. The computed values were, therefore, plotted on log-log graph paper; the result is shown in *Figure 1*, the dashed and zigzag line; the breaks are caused by the changes of K at 3 feet, 5 feet, and 7 feet, and of the change of the percentage factor at 99.99 to 100 blocks from 25 per cent to 10 per cent. There are, therefore, two answers at each of the above charges. Not knowing the correct answer, a line was drawn through the average trend of the computed value as shown by the solid line on *Figure 1*. The error induced is debatable; for dense concrete at 3 feet, the answer is 99 or 123 blocks of TNT; both answers may be obtained from the field manual method of computation. The slide rule gives an answer of 110 blocks of TNT. The average error introduced except when the wall is 20 feet thick, is about 7 per cent plus or minus. Very few people can guess the material or placing factors as close as 10 per cent; and most computations are used merely as a guide. The computator in the

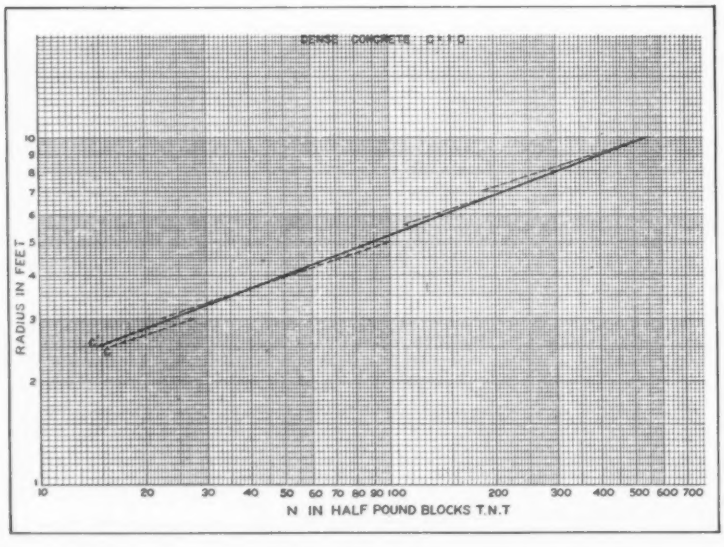


Figure 1

*Courtesy, *The Military Engineer*.

field usually adds a percentage for safety depending on the particular problem.

The circular slide rule *Figure* 2 is divided into quarters, one quarter showing the answer in terms of N (one-half pound blocks). The other three-quarters are for radii of rupture in concrete, good masonry and reinforced concrete. The window shows the radius of rupture for poor masonry. To solve a problem it is necessary only to pick up the correct quadrant for material, select a picture representing the placement of the charge, and set the index against the R in feet; the answer is given directly in the N quadrant, in half-pound blocks. Thus for a 3-foot wall for dense concrete placed as in the example computed above, the left hand quadrant is used, the placement picture (top left for $C = 4.5$) is selected and the index line followed around and set against the *Figure* 3 on the outside diameter. The answer is then found to be 110 blocks of TNT under the index line at the bottom of the chart. The answer may also be 330 half-pounds of gunpowder. (Conversion by the given ratio of 1:3 gives 333 half-pounds.)

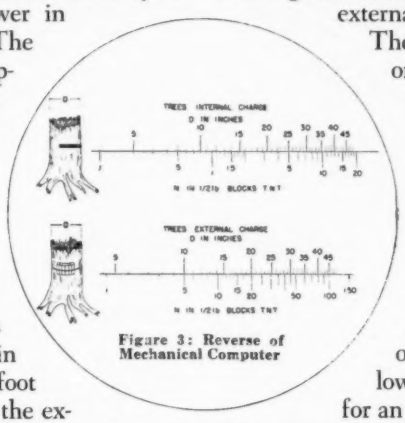


Figure 3: Reverse of Mechanical Computer

Eight different explosives may be used. To obtain the answer, select the index line for the explosive desired. This eliminates the necessity of multiplying N for TNT, by the reciprocal of the relative strength of the explosive used. For cutting timber and trees, the formulae given in the manual are $D^2/20$ and $D^2/125$ for external and internal charges, respectively. The solution of timber problems is given on the back of the slide rule. (*Figure* 3.) Pick the diameter on the top of the line chart and read the answer directly below the line in blocks of TNT. It is not necessary to use the formula unless timbers over 4 feet in diameter are to be cut. For instance, take a timber whose least diameter is 10 inches. For the internal charge find 10 inches on top of the line and the answer is found below the line to be 0.8 blocks of TNT, or for an external charge the answer is 5 blocks. This answer can be converted to other explosives on the breaching side of the rule by setting the TNT index on 5 blocks (the external charge problem) and reading the answer in other explosives under their respective index.

While some officers state that they do not use a formula since they have had enough experience in explosives to just look at the problem and solve it, not all of us are that fortunate. For the former, the slide rule can only serve as a check, but for the second group, it is hoped that this rule will increase the speed and accuracy of computations.

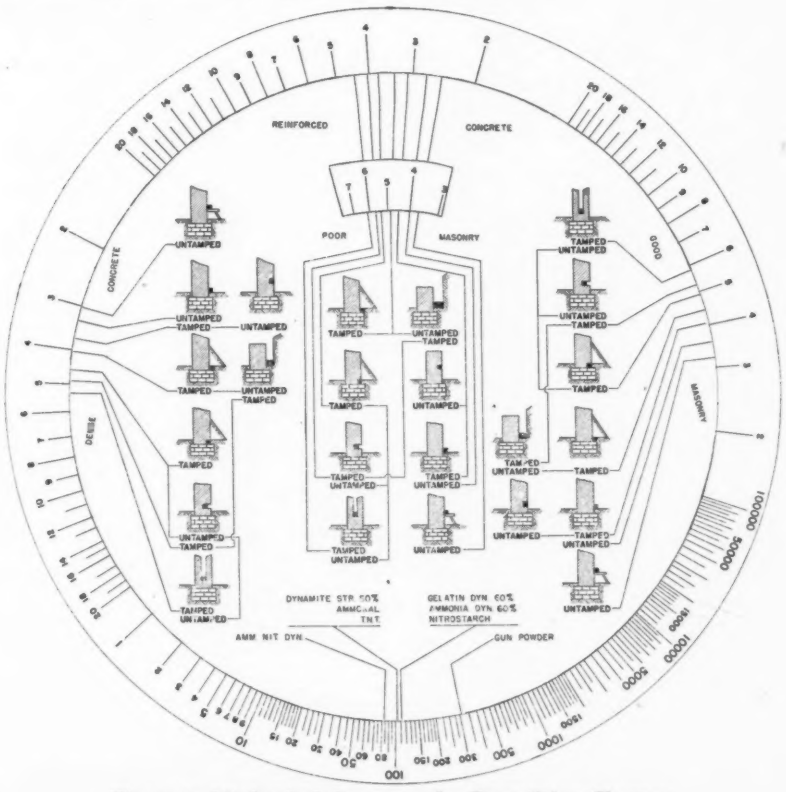


Figure 2: Mechanical Computer for Demolition Charges

The 2d Retraces Its Steps

By Lieutenant Harrison C. Frost, Jr., 2d Cavalry

THE SECOND CAVALRY returned from the 1941 Maneuvers to Camp Funston and its well-earned fifteen-day furlough in a gala mood. They had increased their military education, hardened their military frame, and acquitted themselves well. Second Army was pleased with the showing of the Second Cavalry Division. Division passed its laurels on to the Third Cavalry Brigade, and Brigade in turn complimented the Regiment and its squadrons and troops. And in addition another hash-mark had been added to the 105-year traditions of the Regiment, for it had marched, for a part of the way at least, in the hoof-prints made by the Second Dragoons on its famous march to the Mexican border 96 years before.

Following its successful operations against the Seminole Indians in Florida, the Second Dragoons was divided and moved to Fort Jessup, Louisiana, and Fort Ouachita, Arkansas, in 1842. Headquarters with Companies (as they were then known) B, C, D, E, F, H, and K were all eventually located at the former post, with Companies A, G, and I at the latter which is believed to have been at the confluence of the Ouachita River and Bartholemew Bayou. In 1842 this was frontier country. The following three years were spent in a strenuous schedule of training under the able leadership of Colonel David E. Twiggs, commanding, assisted by Captain William J. Hardee, executive officer, who had just returned from a tour of observation of European cavalry, and who supervised the tactical exercises and mounted drill of the Regiment. This was the same Hardee who was to become the famous lieutenant general in the Confederate forces.

Colonel David Emmanuel Twiggs, first Colonel of the Regiment, 1836-1843.

Rumors of all sorts, even as now, were plentiful in those years. Serious troubles with Mexico had been developing for some time, however, and by the year 1844 it became obvious that war with Mexico was a rumor which would become a fact. Furthermore, it seemed certain that the Dragoons being stationed closest to the scene of the troubles would be among the first to move in event of hostilities. Suddenly in May of that year, Brevet Brigadier General Zachary Taylor was dispatched to Fort Jessup by President Tyler to command an "Army of Observation" on the border. The seven companies of Dragoons were augmented by the Third Infantry and eight companies of the Fourth Infantry to form this force.

By February, 1845, resolutions were passed in the United States Senate offering annexation to the new Republic of Texas, and in June the Texas Congress accepted these resolutions. Mexico considered this an act of war. The United States countered by pressing the claims of Texas to the lands west and south to the Rio Grande as against Mexico's claim of the Nueces River.

On June 15, 1845, General Taylor was ordered to proceed with the infantry to New Orleans for embarkation to Texas. At the same time the Second Dragoons was ordered to march overland some five hundred miles to Corpus Christi, Texas, at the mouth of the Nueces River on the Gulf of Mexico. The continued high state of training and conditioning of the Regiment now stood it in good stead. Preparations, already well advanced, were rapidly brought to completion; supplies and equipment were replenished, and replacements of men and animals were made where necessary. This march, no short one for a unit three years at a permanent post, was to be made in the hottest time of the year. The route was a difficult one and there were many outside the Dragoons who thought that their arrival at Corpus Christ within six weeks as ordered was out of the question.

At 3:00 AM on July 25, 1845, Colonel David E. Twiggs led his regiment off the Fort Jessup parade ground and headed southwest on the dusty El Camino del Rey—the old Spanish "Highway of the King." The column of seven companies numbering about 500 men

and officers was closely followed by a train of sixty wagons of supplies and equipment, marching without distance. The regimental band, newly trained to play mounted, and drawn up to one side of the parade ground at the entrance to the enclosure, continued martial and popular airs until the last wagon had swung slowly onto the highway. The small band of troops, though large for 1845 and the frontier of Louisiana, made a striking appearance as they advanced across the parade and into the flare of torches and lanterns at the entrance. The flickering lights caught and reflected polished sabres and spurs and the bright metal parts on the carbines and horse pistols. Service uniforms, freshly cleaned and neat as though for a review, were colorful even in the half light with the dark blue jackets trimmed with yellow braid, sky-blue trousers wide-striped with yellow up the outside seam, and yellow-banded flat blue forage caps. Heads were high that night and the *esprit* of the regiment was visible in each erect well-seated trooper as his horse pranced by the band. They were off to Mexico!

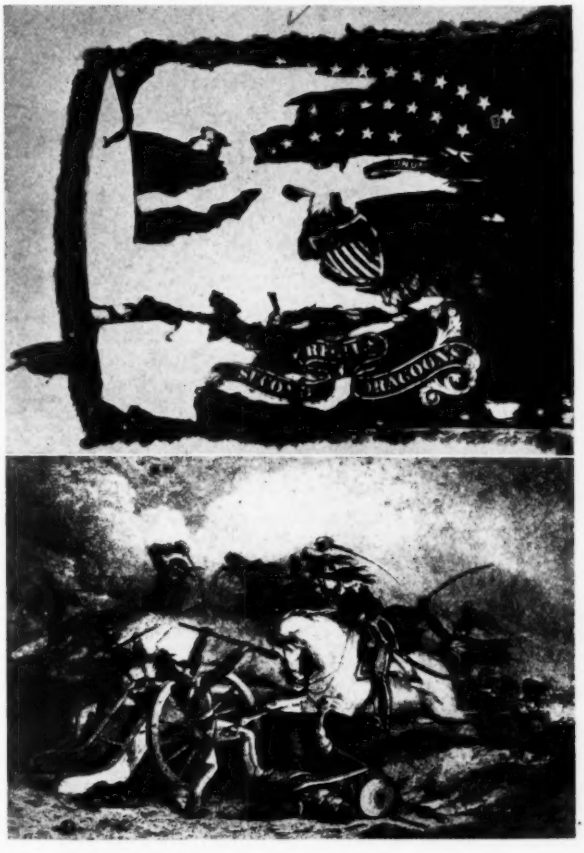
At the small trading post where Many, Louisiana, now stands, the few residents turned out to wave a heartfelt farewell. A few miles more and they had crossed the Sabine River into Texas. Cordial Texas welcomes lay ahead at towns along the route and in bivouac, before they were to reach Corpus Christi on August 27th. They were twenty-six days en route and arrived in such good condition as to merit the special commendation of General Taylor. Late in the year they were joined by Companies A, G, and I which had also marched across country from Fort Ouachita in September.

The Dragoons were to march many another weary mile, however, before the peace of 1848, and to lose many of their number in battle and from disease. They were, too, to add the battle streamer honors of Palo Alto, Resaca de la Palma, Monterey, Buena Vista, Vera Cruz, Cerro Gordo, Contreras, Cherubusco, Molino del Rey, Tamaulipas, Nuevo Leon, New Mexico, and Chapultepec to the regimental standard; and finally as guard of honor to escort General Winfield Scott into the captured City of Mexico to the strains of "Hail Columbia" and "Yankee Doodle" played by their mounted band.

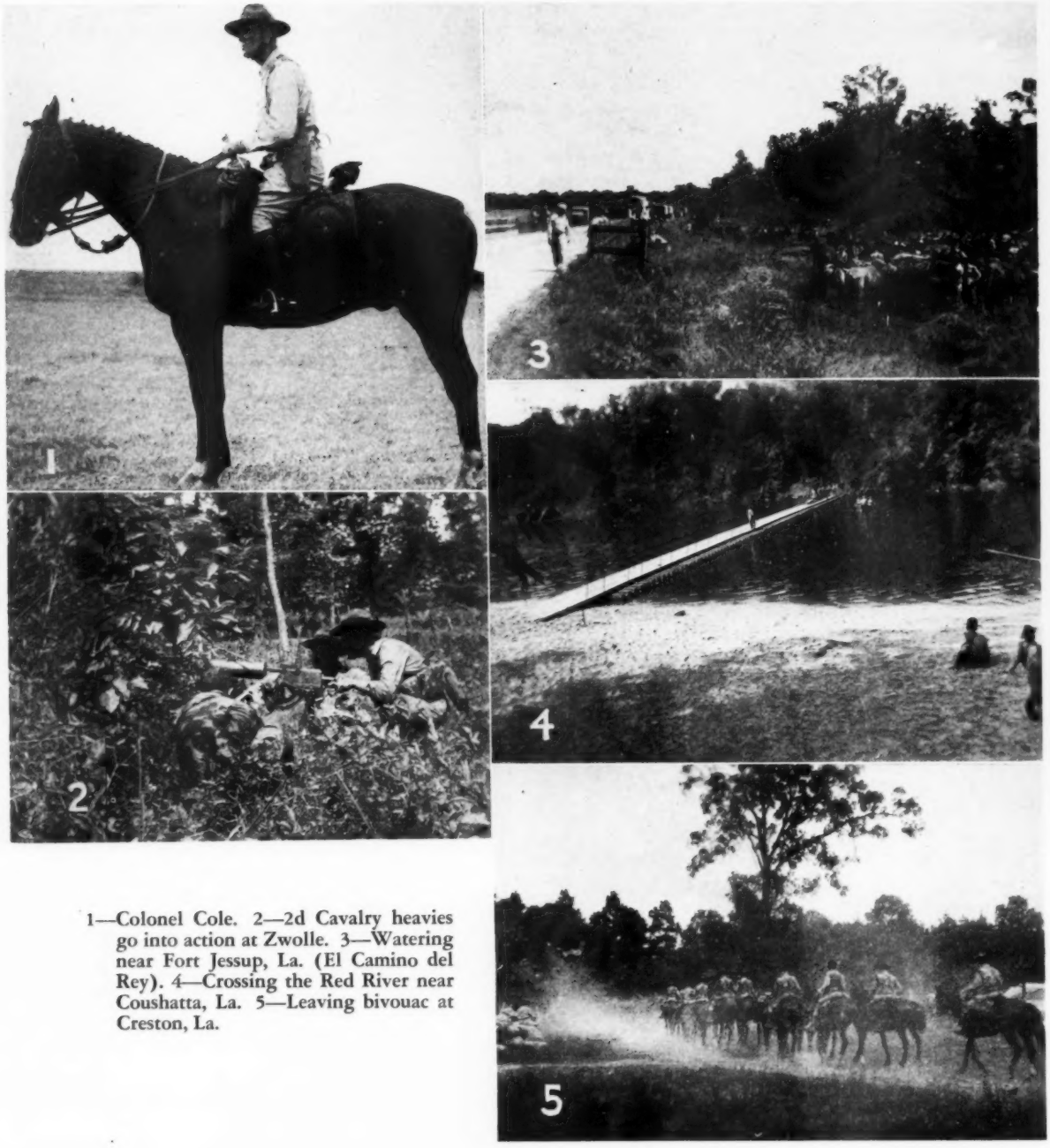
Frontier duty in the Indian country followed until 1861 and the Civil War when the Second Dragoons became the Second Regiment of Cavalry. After action through the war from Bull Run and Fort Donelson to Cedar Creek and Yellow Tavern the Regiment returned to frontier duty again in the west and northwest until the Spanish-American War. Here they saw service with the Santiago Expedition, at Porto Rico, the Cuban Occupation, and later put in two tours of duty in the Phillipines. Garrison duty and patrol work on the Mexican border followed. Then 1918, with the St. Mihiel and Meuse-Argonne, a squadron of the Second was the only American cavalry with the good fortune to remain mounted and reach the firing line. After service in the Army of Occupation, the Regiment at long last returned to Fort Riley for twenty-two years of a quiet and peaceful post.

At 3:00 AM on September 18, 1941, Lt. Col. John T. Cole, commanding, led the Second Cavalry out of its wooded bivouac two miles west of the site of old Fort Jessup, and headed southwest on the macadam surface of El Camino del Rey—otherwise known as U. S. Highway 6. This was no march to the aid of a friendly neighbor 500 miles away, but rather the approach to an attack directed between two Blue divisions only 10 miles south. There was no band; there were no lights, and there were no uniforms "freshly cleaned and neat as though for a review." On the 17th the Regiment had marched 25 miles over dusty, back country roads from the vicinity of Pleasant Hill and the red, rustlike dirt of Louisiana marked clothing and equipment. Only horses and weapons were clean. But spirits were high and the command marched forth with great anticipation of another crack at the Blues.

Following the course of the Second Dragoons into the outskirts of what is now the thriving town of Many, the Regiment headed due south over logging roads and covered trails, through the pitch darkness of woods,



***Top*—Dragoons Standard, 1845. *Bottom*—Captain May at Resaca de la Palma, 1846. Companies D and E, 2d Dragoons, charging Mexican batteries.**



1—Colonel Cole. 2—2d Cavalry heavies go into action at Zwolle. 3—Watering near Fort Jessup, La. (El Camino del Rey). 4—Crossing the Red River near Coushatta, La. 5—Leaving bivouac at Creston, La.

completely blacked out. The objective was reached at dawn and the attack was launched on the left flank of the Second Cavalry Division, across swamps and wooded bayous into unknown country. By late afternoon, in conjunction with a squadron of the 14th Cavalry, the Second had captured a battalion of infantry and forced a Blue retirement to the west and south, losing only one troop in the fray. On the 19th the tide of battle took the Regiment northward through Many to the battle of Zwolle where the first phase of the G.H.Q. maneuvers ended.

On the morning of the 22d of September the Regiment was again heading southwest on the route of the Dragoons—15 miles on El Camino del Rey—crossing the Sabine River into Texas, and continuing on to bivouac south of Milam. On the 23d an advance farther southward was made to a position below the town of Hemphill, Texas. From here the paths parted, for the next day saw the Second Cavalry start its phase of the Second Army withdrawal which was to end at Greenwood, Louisiana.

From the 2d of September the Regiment had been

In Louisiana: Ready for night operations —Photo by *Life Magazine*

on the march from Crossett in the southeast corner of Arkansas, southwest across Louisiana and into East Texas, effecting the crossing of the Ouachita, Red and Sabine Rivers, maneuvering constantly, and engaging in three major "battles." They had marched by day with temperatures above 100 and rolled out at night in cold, dewy bivouacs when the mercury touched below 50. They had trotted through dust, which rose in clouds to choke men and horses, and plodded knee deep through swampland where the going was too heavy to do else than lead. With little sleep when in contact with the enemy, and little food when supplies could not get through the mud of back-country roads, the Second found this to be a very real warfare, less only the bullets.

It should be remembered that the Second Cavalry in September, 1941, unlike the Dragoons of 1845, was composed of seventy-five per cent selectees—citizen soldiers for whose showing on these maneuvers there is nothing but the most profound respect from officers and men of the "old army." And so, today on the verge of a crisis which no one can foretell, perhaps the command and members of the oldest mounted regiment can, with pardonable pride, say that they too, like their predecessors of ninety-six years ago are "Always Ready."

Regimental Standards

It is interesting that between the dates of 1835 and 1886 the *field of the artillery standard was yellow;* since 1886 it has been scarlet. Prior to 1889 the *field* of the cavalry standard was *blue.*

Supply of a Horse Regiment

By S-4

Editor's Note: This is the sixth and last of a series of articles on this subject.

IN our previous issue we left S-4 at the command post of the First Squadron, where he had gone to make the arrangements necessary to care for the supply of that squadron and fit them into his plan for the supply of the regiment. Upon arrival at the command post he informs the squadron commander of all that he knows of the situation and regimental and brigade plans, being very careful to stick to facts and state only so much of either plan as he actually knows; he does not offer any surmises or gratuitous opinions; often commanders' plans go awry because some thoughtless staff officer assumes a lot more knowledge than he really possesses. He is careful to make sure that the squadron commander understands the instructions about rations and grain for the next day, thus insuring that this squadron will not be short a meal or feed in the event they do not see their kitchen trucks before the next evening.

Having finished his business with the squadron commander he then confers with the Squadron S-4. He changes the route for the squadron convoy; instead of having it proceed by its own previously designated route to the truckhead, S-4 decides that he wants to get his entire convoy under his own control at the earliest time possible. By doing this he will avoid the risk of lost routes, poor timing, and missed connections. He instructs S-4 to bring his convoy to the regimental train park, and designates on the map the route over which the forage trucks are now coming to the squadron. It would not be a bad idea to leave a man from one of the forage trucks to act as guide for the squadron convoy, or if time runs close to combine the squadron convoy with the empty forage trucks, the whole to return under charge of the transportation officer. He leaves the selection of the method to the Squadron S-4, to be made on the basis of time. He instructs Squadron S-4 that none of the loads on the trucks, cantle rolls, equipment, etc., will be dumped in the squadron area, but that instead, all trucks of the convoy will move with these loads. Why? Simply because he does not expect to get these trucks back into the forward areas before daylight. The ammunition trucks will be up before morning, but the kitchen trucks are to be grouped under brigade control; no telling when they may be released. And a dumped load under any but the most certain conditions is usually a "lost load." His last instructions cover the time the kitchen trucks which remain with the front line troops will be withdrawn, their route and point of assembly with the other front line troop kitchen trucks, to move to the brigade train park.

Regimental Plans

He then leaves the squadron to return to the regimental train park, going via the regimental command post again, where he learns there have been no further changes affecting him or his plans for the night. Before leaving the regimental command post he confers with S-3. He checks over the situation map to make sure of troop dispositions; discusses tomorrow's plans with S-3; informs him when he expects to get back with the ammunition trucks; in fact he goes over just about everything with S-3. The result is that each knows the others plans, and both knowing what the other is about, each will do a better job for the regimental commander than they otherwise could do. No watertight staff compartments in this regiment, but each staff officer playing his assignment on the team.

Arriving at the train park, it is a simple case of reloading the dumped loads when the trucks arrive, making sure all crews are on hand, informing the Supply Sergeant, Transportation Officer, and Maintenance Officer fully of all plans, getting supper, and departing for the truckhead when the trucks from the First Squadron arrive. S-4 leaves for the truckhead with twelve trucks instead of the fourteen on which he had originally planned. Of these, five are kitchen trucks and seven are combat. He also has the disabled headquarters troop truck in tow.

At the truckhead S-4 will receive his supplies in bulk. He trades empty gasoline and oil containers for full containers, services all his convoy trucks from gasoline at the truckhead so that when he leaves, all service tanks will be filled and he will have his complete allowance of full containers as well. He turns the disabled truck over to the officer in charge of the truckhead who will see that it is evacuated to the rear.

Loading

In loading his supplies he can take his choice; either break down into troop lots, or load in bulk. His trucks are all partially loaded with equipment and baggage; he has a little better than sixteen tons of rations, grain, gas and oil; eleven tons of hay; and about three truck loads of ammunition. Obviously he cannot haul all of it at one time. He does not have enough trucks to haul in one load even the most essential supplies if they are broken down into troop lots. He knows that all troops have sufficient rations and grain to include supper tomorrow, and that hay is not needed tonight. The truckhead officer advises him that extra ammunition trucks will not be attached to the regiment, therefore the problem of hauling this in his trucks confronts him. The practical solution is to so load his trucks that he can

move the most essential items up to the regimental area tonight, and the rest into an area where his men can break it down after they have had some rest.

S-4 decides to load the ammunition and some gasoline and oil on the ammunition trucks dividing the load among the seven, except for loading the machine-gun and special weapons troop trucks with their type of ammunition only. He then loads the rations and grain by bulk on the kitchen trucks, and as much of the balance of the gasoline and oil as these trucks can carry. The remainder of the gasoline and oil he loads on the ammunition trucks, to be dumped at the point where he will later divert the kitchen train from the ammunition train. Or if you prefer he can leave this additional supply of gasoline and oil on the ammunition train. He does not accept delivery of the hay which is in semi-trailers, and can be easily moved to the rear, or remain where it is until needed tomorrow. That is the problem of the officer in charge of the truckhead and Division G-4. S-4 did his part when he asked for permission to purchase hay for tonight, and G-4 should have sized up the situation and stopped shipment of hay to him. If S-4 accepts delivery he will have a heavy burden on his neck until the next night when he will want hay, but who can tell where the regiment will be then, and S-4 will be busy dumping loads, hauling hay, and reloading, at a time when his hands will most probably be very full, and he will want to save his men all the extra work possible. It is just as essential not to become overloaded with supplies which you are not equipped to handle as it is to obtain adequate supplies when you need them. The truckhead officer suggested that he dump the hay tonight at the truckhead and S-4 could get it tomorrow, but S-4 was not hooked by that one. The hay would have been his, and it would have been his responsibility to move. No different than accepting delivery, and S-4 definitely does not want the responsibility for that hay to be his until tomorrow night.

Delivery

Having completed loading S-4 gives instructions to the Transportation Officer and the Supply Sergeant before moving out in order to prevent delay or traffic jam at the point where the kitchen train will be diverted. The convoy marches with the ammunition train in the lead. At the diversion point the ammunition train continues on to the regimental area in charge of the transportation officer and S-4 conducts the kitchen train to the brigade train park. Upon arrival there he contacts the representative of Brigade S-4, or if not present, he selects his own area in which to park the kitchen train. He then instructs the Supply Sergeant to let the men rest until daylight, and then to break down the rations and grain into troop lots, and informs him of the time he expects the kitchen trucks of the front line troops to arrive at the park, directing him to send a guide to the diversion point on the road to conduct them into the park. S-4 then leaves for the regimental area.

Arriving in the regimental area its a simple case of making sure the ammunition trucks have been released to squadron and troop commanders; checking up to see that the kitchen trucks that remained with front line troops move to the brigade train park at the time designated in charge of the transportation officer, reporting to the regimental commander; checking with the maintenance officer to learn of any loss or damage to other vehicles; contacting S-3; getting some breakfast, and fortifying himself against another day which is bound to keep him fully occupied meeting every sort of situation in the most practical way in order to keep the regiment fully supplied, with ammunition principally, but with whatever else they need also. Did we hear someone say something about sleep?

Supply Mission

There are many times when S-4 may feel that he is not getting all the help he should have from higher echelons. The worst of it is, this often proves to be the case. Each commander and staff officers of a unit will exert himself to save his own men. This applies to service troops as well as combat units, though service elements realize more and more that their real mission is to SERVE. Supply, we understand, is a responsibility of command, and, to us, this means getting required supplies actually into the possession (hands) of the lower echelons for which any given higher echelon is responsible. For the division, to the regiments; for the regiment, to the troops; and for the troop commander, into the bellies of men and horses (assuming normal prehension), into tanks of vehicles, and up to gun positions. For each echelon this presents obstacles and difficulties which must be overcome if the responsibility is carried out to its fullest meaning. And there's the rub, the way we see it. Today the principle of supply is held to be complied with when you place supplies WITHIN REACH OF UNITS. By this is meant placing supplies within reach of the trains of the units. Lets see how this works out, and what might make it easier on the units.

Principles and Methods

Supplies for the division will usually be delivered to railheads by Army; sometimes to truckheads if rail is not available sufficiently advanced. In any event it will be the unusual case when the truck-haul for the division will be a long one—even the Cavalry Division. Except in the most extreme situation where the haul from Army railhead or truckhead to regimental areas is exceptionally long can we see any reason for Division to establish a truckhead for delivery to regimental trains. And when the distance from railhead to regimental areas is what we might call normal, anywhere from ten to twenty miles, Division is very apt to prescribe "Railhead Distribution," thus requiring regimental trains to make the haul from railhead to their own areas. In the first instance cited the divisional train and the regimental trains are both busy covering an extreme

CAMOUFLAGE?

1—Air observer spots supply train halted on the road. Excellent cover for vehicles on the left, no fence. 2—Old type rolling kitchen. Smoke plume is a sure give-a-way. 3—Who picked this spot? Cover near by.

distance. In the second instance the regimental trains only are busy. Granted, one transloading is saved but at the expense solely of the regiments.

When a regiment has been on the march, or in combat during the day the chances are more than even that the truck drivers have been on the move most of the time. And they can anticipate the same thing the next day, and the next. Life in the areas farther to the rear where the division trains generally are located, is not one of basking in the sunshine, but it is a lot less strenuous than following the regiment, or serving it during combat. Up there its a case of being up early in the morning (night) and working until well after dark in the evening doing the job of serving the troops with meals, ammunition and gas. Then why, except in extreme situations require the regimental truck drivers to "come and get it" besides? It usually means most of the night on the road for them.

The two methods of delivery of supplies to regiments have been illustrated in this series. The first night the regiment was out, division trains delivered supplies direct to the regimental area. The supplies were broken down and delivered to troops, and everyone, even S-4, could get some needed rest against a strenuous next day. Contrast this with the method followed in the last situation. No one in the regimental train will get much rest, if any. But the personnel of the division trains will fare pretty well in this respect. There will be situations when the latter method will have to be used, but generally speaking, we like a principle of supply which places supplies IN THE HANDS of lower echelons, rather than WITHIN REACH.

The same principle should be followed in the regiment. Obviously the lack of transportation may require otherwise, as in the initial plan of S-4 to require the First Squadron train to move to the truckhead for its supplies. But what would you think of S-4 if, when he purchased hay and grain he had required the First Squadron S-4 to send his trucks to haul his share? S-4 was able, by having a part delivered by the farmer, to use his own transportation to deliver hay and grain to the First Squadron directly. That was placing the supplies in the hands of the First Squadron, and not within their reach. Another feature which operates against this principle in the regiment is the lack of a labor pool at the disposal of S-4 with which to handle supplies. He must always call on the troops for details. It is the Table of Organization that is at fault here, and it cannot be helped.

There are troop commanders also who do not seem to have a complete understanding of their responsibilities for supply. We have seen instances when hay could not be delivered right under the horses muzzles by the trucks, but had to be unloaded some distance away. Because it is hard to handle or transport except in a vehicle, the horses went without. There is no excuse for that. Hay can be packed, even on a McClellan. Then there is the matter of hot meals. Every soldier is entitled to two hot meals every day under practically any condition. Surely, there are times when it just simply cannot be accomplished, but they do not obtain as often as the event does. In combat men get lost, and are late for meals, and generally it is because their responsible officers have not planned for guides and reliefs. When they do reach the kitchen it has closed shop, or what is left to eat is cold. How often have you eaten a cold breakfast, except possibly for a cup of hot coffee, because the outfit was marching early, or for any other reason which the cooks could use as an excuse for mopping up and loading early? The troop commander has not discharged his responsibility for supply, until every man and horse is well and properly fed, and in combat every weapon served with ammunition. He has plenty of assistants to aid him; supply and mess sergeants, platoon leaders, platoon sergeants, sergeant file closers, and squad leaders; and when all of them work at their jobs, you will see that well fed, willing, well disciplined, hard fighting troop with a morale that cannot be beaten, which is a pleasure to command, or have in your regiment.

Summary

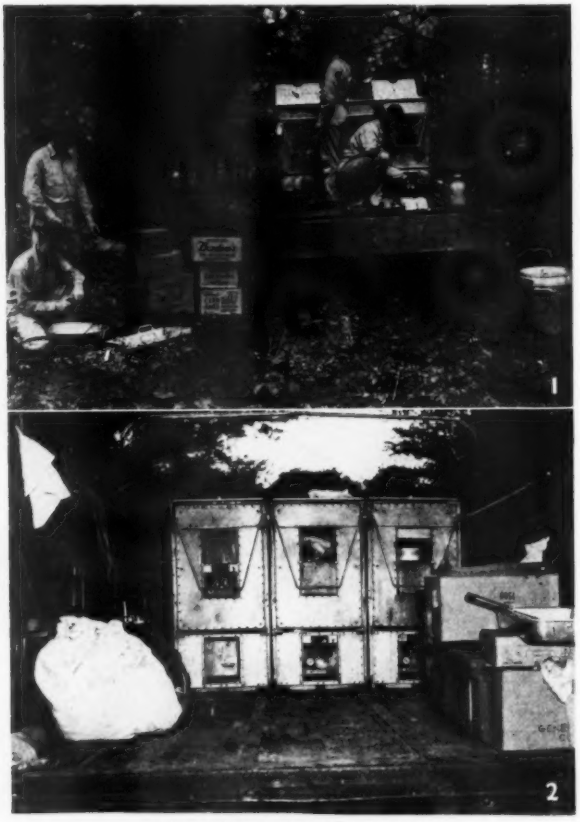
To get back to our Regimental S-4: He must be active, we have tried to show that he is busy ALL the time; he must have a thorough grounding in tactics, to be able to size up in advance the probable needs of the regiment; he must be helpful, particularly to the squadron supply officers; he must have experience, else the troops will be harassed, and half the time they will not have WHAT they should have WHEN and WHERE they should have it; he cannot be a believer in the fallacious theory that cavalry can get along anyhow, and that it's part of a cavalrymans life and his horse's lot to go hungry half the time, or more; and above all he must be PRACTICAL, it's the PRACTICAL solution that gets results in supply. S-4 MUST BE A REAL "GO-GETTER."

We are sure that all regimental commanders know what a good supply officer should be, and how much the success of the regiment depends on the supply officer. And they know also that supply duty does not have the romance of "command." All the more reason for picking the right man for the job, so this one question: Why do so many regimental commanders often assign a junior officer, with little or no training, experience, or practical knowledge, to duty as supply officer? It is not that they do not have older and more experienced officers available, particularly in peacetime; we have been in regiments where there were as many as three surplus field officers, and still a lieutenant with three or even less service was the supply officer. And we have seen other regiments where the same system was in effect. It is not fair to the junior officer. and it isn't fair to the troops either. Boiled down, it isn't fair to the regimental commander because "SUPPLY IS A RESPONSIBILITY OF COMMAND."

KITCHEN TRUCKS

*By Major M. H. Matteson, Cavalry**

EDITOR'S NOTE: *It is clearly obvious that mechanized cavalry units must have kitchen trucks. It is believed, therefore, that the time has arrived when kitchen trucks should be standardized by the Quartermaster General and treated as a complete unit provided with the necessary and desirable factory built-in fixtures. The arrangement illustrated in our July-August, 1941, issue of* The CAVALRY JOURNAL *and the truck here illustrated could well serve as a basis for a satisfactory model.*



GASOLINE FIELD RANGE

1—A makeshift kitchen truck showing need for standardization. 2—A kitchen truck at its worst.

A GOOD SOLDIER can always march another mile and lose another hour of sleep. With a cup of coffee under his belt, hardship becomes a trifle and with hot food added, his endurance increases without limit.

The pictures on page 89 show a kitchen built into a 2½-ton truck by the Seventh Reconnaissance Troop. There is nothing shown that has not been tried by some other Troop Commander. Neither is the truck the final answer. The one shown, however, has stood the rigors of several maneuvers.

A 2½-ton truck is authorized by T/BA to carry the kitchen and crew for a reconnaissance troop. This has been found insufficient. To supplement the shortage, one, two, or three one-ton trailers are borrowed for a maneuver from units not participating. One is always hauled by the kitchen truck, the second by the combat truck and the third, if needed, is towed behind a scout car.

A third trailer was used on the Fourth Army Maneuvers in Washington. It was hauled behind a scout car of a detached platoon and was loaded with rations, water cans and a pack kitchen. This platoon functioned alone for four days at a time, without replenishing rations.

The kitchen truck equipment includes the following:

a. Two cabinets.
b. Ice chest.
c. Two water tanks.
d. Three ranges.
e. Two hot water heaters.
f. A heavy oak-topped table with demountable legs.
g. A gas unit for coffee.
h. Three containers, hot food (each with four pans of 7½-quart capacity).
i. Three containers, hot liquid, 3 gallons each.
j. A ramp.

The cabinets were built on a pine framework with plyboard fronts and masonite tops. The ice chest has a capacity of seventy-five pounds. It is used to cool butter and small quantities of meat. A better chest would have been one with a top opening and finished so that the top formed an extension of the cabinet. The water tanks are the standard forty-gallon heater type. The left tank was shortened by cutting an eight-inch section out of the middle. Two-inch filler pipes with plugs were set into each tank at the top rear. The ranges can be removed by turning them on a side and sliding them over the right table. The hot water heaters were purchased from the Hartung Heater Company, Des Moines, Iowa, at a cost of $17.00 each. The heater is called a Gold Medal Heater for a 33-gallon G.I. can. The table was made of a layer of seasoned oak on a pine base, glued and screwed together. The legs screw into fittings. The food and liquid containers were pur-

*Commanding 7th Reconnaissance Troop, Fort Ord, California.

chased from the Vacuum Can Company, Chicago, Illinois, at a cost of $62.00 each for the food containers and $30.00 each for the three-gallon jugs. The bows of the truck were raised to give a center head clearance of 6 feet 2 inches. The front and sides of the truck were boarded up. In movement, the front curtain is rolled to prevent suction of dust into the rear of the truck. The ramp as shown is to be improved by covering it with old fire hose laid crosswise and overlapping, like shingles on a roof. Each water tank is held in place by two iron bands bolted through the truck bed.

The advantages of a kitchen installation, such as shown, are self evident. Ranges are removed only for cleaning. The equipment can be packed and moved on short notice. The hot water heaters can boil fifty gallons of water in thirty minutes, allowing a constant supply without using the coffee heater unit. The hot food and liquid containers are expensive but worth what they cost. They are rugged and practically indestructible. Faucets should be purchased for each jug, to prevent spilling. The faucet, being breakable should be carried separately.

1—Arrangement within the truck. Ice chest is being changed and rope shown has been replaced by a wide leather strap to hold door closed. 2—The oak-topped table. Fittings similar to the feet, are screwed into the underside of the table. Table is carried in a trailer. 3—The cabinet construction. Door on left clears ice chest by one inch. Square steel box on tail-gate is a funnel for filling water tanks. Note canvas shield behind the ranges to prevent drafts. Space above canvas is left open during movement to prevent dust being sucked into rear of truck. 4—Shows 3-gallon hot liquid containers. Gold Medal heater installed in a 33-gallon G. I. can and the hot food containers. The ramp has two hooks in the top end which fits into slits in the tail-gate. The box at the end prevents the ramp being too steep.

Scout Car Command Post

By Lieutenant Charles Yon, 11th Cavalry

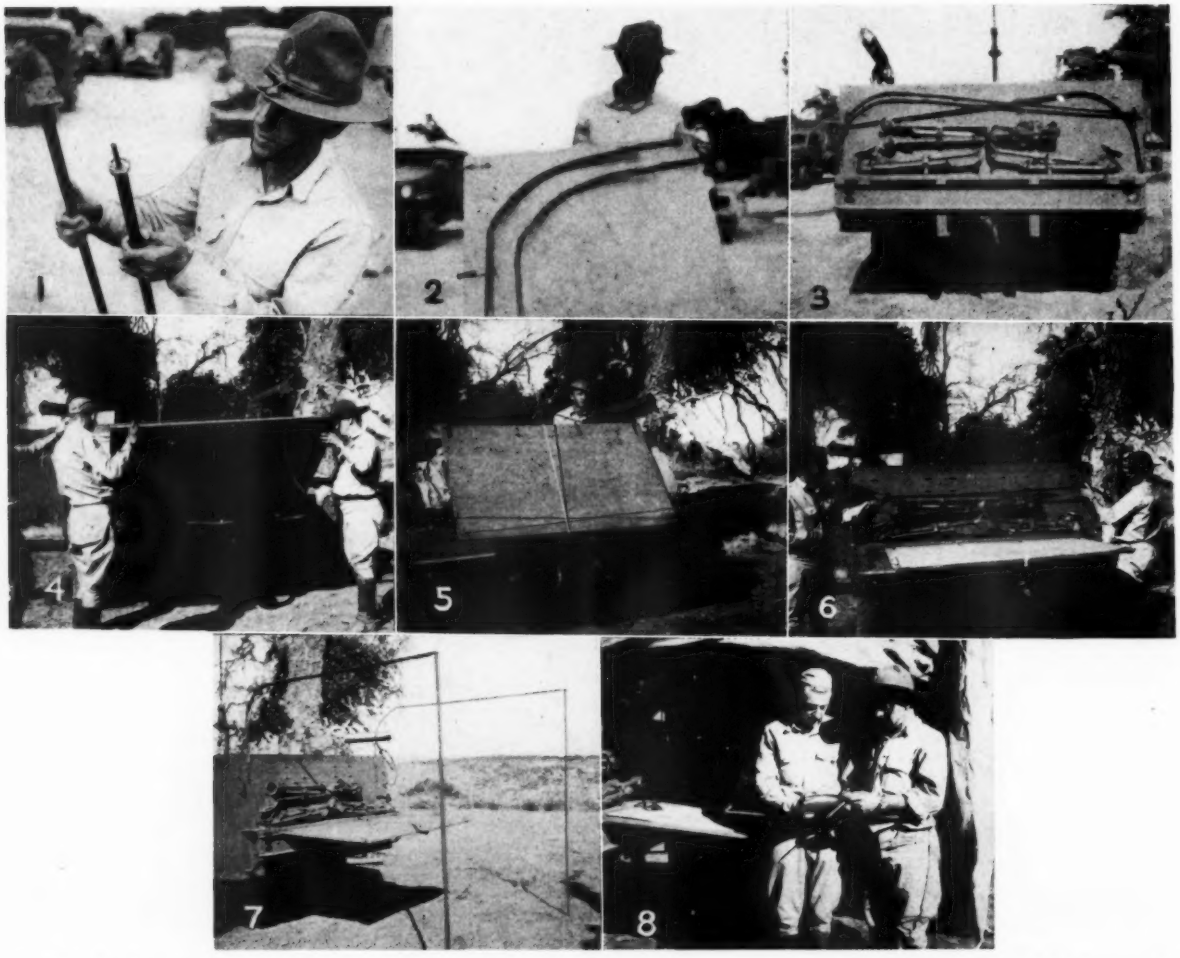
UNLOADING the field desk from the scout car, model M-301, opening it on the ground, spreading the situation map on our knees and saying "This is the Regimental Command Post" wasn't very satisfactory.

It didn't afford camouflage from aerial attack. There was no privacy. It didn't protect from the sun or the wind or rain. It certainly was uncomfortable.

In devising a contraption to act as a Regimental Command Post attachment to the scout car we had to remember that the vehicle is ordnance property and that regulations prohibit any alterations on ordnance property.

The Map Table

Over the top of the rear bumper and under the shelf upon which rests the gun mounts of the automatic weapons there is a little space. It is too narrow and too divided by braces to slip the edge of a table into it. But it will accommodate metal catches and upon this slender accommodation we began building our command post. To a three-feet-by-five-feet piece of five-ply board we



1—On the bottom of the piece of angle rod held in the trooper's right hand is the base plate which sits on the ground and holds up the canvas. On the bottom of the piece the soldier holds in his left hand is seen the little screw-rod which goes through the braces and the cover, much the same as the nail on the tent pole of a pup tent goes through each of the shelter halves. 2—These are the braces which extend from the brace-uprights to the scout car. The background for this photo is the improvised desk. 3—This is how the braces are attached to the car when not in use. 4—After the braces are put on the scout car, the canvas is put next to them, and the desk attached thus. 5—Packed and ready to go. Note that the compactness of the pack leaves free range for the machine guns. 6—Arriving at the command post site, the desk is first put in place. 7—The command post before the overhead braces and canvas are attached. 8—A message is received at the command post. The canvas was drawn aside for this photo.

added four metal catches of inch-by-quarter-inch strap iron. The ends of these are bent to a half-moon shape so that they may be fastened securely over the top of the rear bumper, under the gun mount shelf. These catches rest upon the rear bumper so solidly that the piece of ply board (which you may now regard as a map table) is ready for use. To fortify it, we employ wires which are attached to the front two corners of the map table and inside the rear corners of the scout car.

The field desk may be opened and placed under the map table where it will be accessible without being in anyone's way. Now, except for protection and security, the command post is ready to function.

The Angle Irons

A tent-like complement to the scout car is erected using I-C'd canvas and angle iron. To the upright end of an inch-by-inch, by one-quarter-guage angle iron was brazed a piece of flat strap iron one-inch by quarter-inch by twelve inches with an overlay weld of four inches. This piece of flat strap iron, inserted into the top tie-down clips on each side, and a length of upright angle iron (the same size, but six and a half feet long with round pins brazed on the end), furnish the support for the tarpaulin's rear portion. These two rear supports are held rigidly by a straight piece of angle iron with holes on each end to fit over the two pins in the supports. The eye on a guy rope fits over the pin and is pulled tight on either side as supplementary supports.

Packing the Command Post

This improvised command post may be packed, unpacked, assembled or dismantled quickly and easily. The accompanying photographs illustrate how snugly the contrivance fits on the rear end of the scout car, without any part of it overlapping either side. After the rear supports are rolled within the tarpaulin, the bundle is placed across the rear shelf against the gun mounts, and lashed by two straps. This bundle acts as a cushion for the map table which is folded over it, eliminating vibration.

Camouflage

In our present desert camp, the khaki colored tarpaulin against the drab sandy terrain is camouflage enough. When we move to our Camp Lockett base we will probably paint the tarpaulin to conform with the greener country. Too, the paint will serve to make the tarpaulin opaque against the scout car's emergency light which we extend to the command post for night operations.

★ ★ ★

History

Popular knowledge of history, I believe, is largely based on information derived from school text-books, and unfortunately these sources often tell only a portion of the truth with regard to our war experiences. Historians have been inclined to record the victories and gloss over the mistakes and wasteful sacrifices. Cause and effect have been, to an important extent, ignored. Few Americans learn that we enrolled nearly 400,000 men in the Revolutionary War to defeat an enemy that numbered less than 45,000, or that we employed half a million in 1812 against an opponent whose strength never exceeded 16,000 at any one place, and fewer still have learned why these overwhelming numbers were so ineffective. The War between the States pointed numerous lessons for our future protection, yet seldom has a nation entered a war so completely unprepared, and yet so boastfully, as did the United States in 1898. Veterans of the World War often seem to overlook the fact that almost a year and a half elapsed after the declaration of war before we could bring a field army into being and even then its weapons, ammunition and other material were provided by our Allies. And many of them seem unaware of the fact that the partially trained state of our troops proved a costly and tragic business despite the eventual success.—*General George C. Marshall, Chief of Staff of the United States Army.*

The 6th Reconnaissance Troop Maneuvers

By Lieutenant Raymond B. Torkildson, Cavalry

SHORT in equipment and trained personnel with little field experience of our own or of similar troops to rely upon but with an eagerness to learn as many do's and dont's as possible, the Sixth Reconnaissance Troop cast its lot with the Red forces in the first GHQ maneuvers in Louisiana. Having been in command of one of the three reconnaissance platoons, my experiences related directly to the problems of the platoon in the field. My remarks in this article, therefore, will primarily concern the platoon.

Missions

Since the MISSION is always of primary importance, I was interested in learning what missions my platoon was best fitted for. One observation I made quickly: that the Staff was having a hard time making up its mind what we were created for. For example, while on a reconnaissance mission to find the Blue main body and determine its flanks, I received this radio message: "Two Blue scout cars reported at bridge two miles south of A, Get in and destroy them." I was perplexed, not so much because I had reported the Blues myself several hours earlier but rather because it called for action contrary to the only SOP we had had time to adopt. I had frequently been cautioned that we never fired on the enemy unless necessary to avoid capture or to accomplish our reconnaissance mission. If there was any word every man in the troop had been taught to know the meaning of, it was "stealth." Destroying two scout cars seemed to call for something more than stealth. On one occasion my platoon was given the mission of preceding a combat team by no more than one mile. We were obviously being used as a sort of auxiliary advanced guard, tied down to the rate of march of foot troops. My mobility and my 193 radio set—perfect for long range reconnaissance—had been entirely overlooked. I also had an experience with the other extreme, having been given a mission for a single day's reconnaissance covering a general route of about four hundred miles. No enemy had been reported in this wide sector. Yet, twice in three days I took my four scout cars over this long route, which might better have been patrolled by an officer patrol in "jeeps" saving my platoon for more suitable missions. Since radio communication is impossible at such distance, I was compelled to rely upon public telephone communication, which would have been equally available to an officer patrol. Somewhere between these two extremes, lies the most satisfactory zone for a reconnaissance platoon. My platoon was of most use to the division when it operated fifteen to twenty-five miles in front of the division. Moving aggressively forward at this distance but avoiding engagements with enemy reconnaissance and security patrols whenever possible, we had a fair chance of getting through to the main body of the Blues and reporting back the information in time to be extremely useful. Though my platoon was never in a position to fight a delaying action, observation of Blues on that mission in Corps maneuvers impressed me with the effectiveness of scout cars so employed. I saw one platoon of the 107th Cavalry cause a combat team commander a lot of worry one day until the platoon leader overplayed his hand by remaining in one position too long, giving the infantry time to move up two 37-mm. guns which made quick work of two scout cars. I am still convinced, however, that the "Reconnaissance" in our name is no misnomer and that it should be taken more seriously by the brass hats.

Operations

The disposition and control of my vehicles as well as the method of advancing in tactical situations caused me considerable trouble. I soon discovered that in order to keep up the rate of march expected of my platoon, I would have to make a modification of the old method of advancing by bounds. By this method the second vehicle moved to the position of the point vehicle before the latter moved on to its new position. In order to speed up the movement, my point vehicle moved on as soon as a reconnaissance to the front and flanks had been made, without waiting for the second vehicle to move up. Then, on signal from the point, the second vehicle moved to the new position as fast as practicable. As this method kept the point vehicle one hundred to five hundred yards ahead of the command scout car, the point presented a special problem. I used a jeep, with a driver and two riflemen as a point. It soon became clear that these three men should be trained scouts and among the most reliable men in the platoon. In order to properly control the point I found it necessary to supply it with the best maps available and to require that one rifleman be on constant alert to the rear for signals from the command scout car. A few simple arm signals were helpful for this purpose. Having my scout car declared out of action twice because of the failure of the point to make a thorough reconnaissance before signalling "all clear" was enough to convince me that carefully picked men only should be entrusted with that responsibility.

The primary function of my platoon was to get information of enemy forces. Information is useless if we keep it to ourselves; it must get back—and get back in *time* to be of use. Normally the only satisfactory means at my disposal was my 193 radio; if my radio was out, my platoon was out of action for all practical purposes. Rarely was I able to depend upon public telephone communication; moreover, motorcyles proved unsatisfactory due to the long distances, bad roads, danger of capture, and the difficulty which they had in finding the message center. The use of code and the need of operating the radios while the scout cars are in motion requires highly trained operators. Long hours and the increased work of decoding and encoding messages require a capable assistant operator who is able to handle communications alone in the event the head operator is declared a casualty. Since a reconnaissance platoon is always operating during fighting time, messages must be cleared as rapidly as possible. I found the CD 93 to be too slow. A random grid system using keypoints, however, simplified the use of the cipher device by shortening messages considerably. A simplified code system within the troop would expedite messages even more. Although authorized one radio per scout car, my platoon went through maneuvers with one radio. I found it extremely difficult to operate by sections with only one radio. The only solution was to maintain contact between sections with jeeps or motorcycles, and in case these failed, certain assembly points were designated. In that way the section without a radio was kept in relatively close contact with the troop CP. In order to operate effectively, however, one radio per section should be the minimum.

Administration

When a unit operates as far from the Troop CP as a reconnaissance platoon normally does, keeping the men properly fed is a difficult problem. This is particularly true when the platoon is on both day and night missions, which was the case of my platoon during a part of the maneuvers. Even though the normal procedure is to call the platoons into the CP after dark for chow, it is a wise policy to carry "C" rations in the cars, as the platoon often gets too far from the CP to return for mess. The Sixth Reconnaissance Troop adopted the policy of feeding all platoons two hot meals per day. With the platoons operating in a wide sector this was no easy task; for example, on one occasion the kitchen truck traveled over one hundred miles to feed the troop a hot meal. It was found to be more satisfactory, however, to call the platoons into the forward echelon of the CP for mess after dark and to send them out again with a hot meal before dawn.

Maintenance requirements closely paralleled those of feeding. We found that pulling the platoons in as stated above to be the best solution to the problem. Because of the great number of miles of rough terrain over which the scout cars are frequently compelled to travel, the maintenance crew must constantly be on the job. Scout cars take a rough beating and consequently require frequent inspections and skilful maintenance by the drivers as well as by the maintenance crew. I found that drivers who are on the job can do a lot to keep their cars rolling as well as to save the overworked grease monkeys hours of work under the stars. With the scout cars averaging 4,000 miles during the Louisiana maneuvers, a remarkably small amount of maintenance was required.

Back again in garrison, we are much the wiser for our experience. Though short two of our problem children, i.e., the motorcycles; our scout cars, guns, and rifles came back looking better than when we moved out. Having had our training period interrupted by maneuvers, we are now again able to resume that training with a much clearer conception of actual field conditions by which to be guided in the future.

Sporting Spirit

". . . The flame of the sporting spirit must be applied to the training of troops. We must put to good use the eager strength and skill exerted in so many fields of activity, the desire to excel which is so dear to the young, the fame with which public opinion endows champions; in short, the immense expenditure of energy and enthusiasm allocated by our era to physical effort and competition. Essentially, nothing lends itself better to the taste for sport than a military career. There is no single military operation which does not call for skill, energy and self-control. There is no single warlike action which is not a collective test and does not demand the concerted action of well-trained teams."—*General Charles de Gaulle, in 1934; Toward a Professional Army.*

Radio in the 6th Reconnaissance Troop

By Lieutenant Robert A. Marshall and Sergeant Cornelius P. Steele

COMMUNICATION is the vital element in the completion of a mission by the Reconnaissance Troop. Handicapped as we were in the recent Louisiana maneuvers, communication was carried on by the use of substitutes for the G. I. equivalent in many instances. The shielding on the M3A1 Scout Car is notorious for its short life. The shielding on our cars was deteriorated before a lapse of six months. To overcome this difficulty without new shielding, regular auto suppressors were installed in the coil lead on the distributor. This does not cut the motor noise on the last four bands of the BC-312-D receiver, however this organization does not use these bands and the noise is very effectively eliminated on the bands covering 1500Kc to 5000Kc.

Cabinets for these sets (SCR-193-D) were not available for issue to this organization before the GHQ maneuvers in La. and wooden cabinets were built by the troop to house the component parts of the set. These cabinets showed very little wear and were still as solid as the day they were installed when we returned from the maneuver.

The troop was forced to make the maneuver with only four radios, so we used one radio set in the Commanding Officer's car and one in the Platoon Leader's car in each of the platoons. This arrangement requires an experienced operator in the Commanding Officers car as the station there must work schedules with division and the platoons on a prearranged time schedule. As division had no extra set to work us at at times this arrangement was followed. If division had the extra set we would work all five stations in the same net and the platoons would send the information to division direct and thereby speeding up the handling the information for division. The use of prearranged schedule requires changing of frequency every half hour. Using this method, over 80 messages were handled in about five hours.

Maintaining continuous radio communication in the field presents wide opportunities for experiment. This organization carried two fifty foot lengths of antenna in the Hq. Platoon radio car and one fifty foot length in each of the other platoon radio cars. These proved invaluable when distances too great for the vertical antenna to span were encountered. Considerable time was spent in testing different antenna systems for auxilliary use on the SCR-193-D. The counterpoise was eliminated because the gain in signal strength did not warrant the trouble caused by carrying it. The fifty foot antenna when thrown over a tree so as to be almost vertical proved to be the best. Also by using extra MS-53 the height of the regular antenna was extended to almost forty feet. This necessitates guying to prevent the antenna from laying down from its own weight. Distances of 110 miles airline were covered during the last phase of the GHQ maneuvers and continuous communication was carried on over this distance.

During the first phase of GHQ maneuvers we were on a relatively high frequency. Using frequencies of the eighty meter amateur radio "ham" band, interference was so great, communication was impossible at times. This band of frequencies is mainly useful to the army during daylight hours as some fifty thousand amateurs jam it to capacity at night. In one phase of the maneuvers it was impossible to work our platoon radio set only ten miles distant, but by relaying through ham stations W5EN and W51ZU in Dallas, Texas, some five hundred miles away, messages were exchanged with our platoon.

By the use of two frequencies our interference was finally cut to the minimum. We used a low frequency during the night and changed to the high frequencies during the day. We consistently worked eighty to ninety miles during the first phase of the GHQ maneuvers and on the trip to Louisiana with stations moving.

★ ★ ★

"The Cavalry Board invites any individual, whether or not a cavalryman, to submit for consideration constructive suggestions or ideas relating to new equipment, improvement of standard equipment, or to any problem or project under study by the Board. The Board will also welcome suggestions as to new problems that may properly be considered. Communications should be addressed to the President, Cavalry Board, Fort Riley, Kansas."

NONCOM QUIZ*

Explanation

The subject matter of this test is COMBAT ORDERS for commanders of small cavalry units.

The questions are asked in true or false style. Underline the appropriate word indicating whether you think that the statement is true or false.

You can check your answers against the solutions which appear on page 96.

Questions

1. When a platoon commander decides to issue his instructions in the form of a "complete" oral order, all of the squad leaders, including the leader of any attached machine gun unit, should be present.

True False

2. A commander uses fragmentary orders when there is not sufficient time to issue a complete order.

True False

3. Fragmentary orders are always issued orally.

True False

4. In combat, platoon commanders usually receive their orders from their squadron commander.

True False

5. A good order should tell subordinate commanders *what* to do *and how* to do it.

True False

6. Indicate by underlining the items listed below, those which must be *decided* and ordered by the *leader of a horse patrol.*

a. Strength of the patrol.
b. Formation to adopt.
c. Hour to start.
d. Where to send information.
e. Where the second-in-command will ride.
f. Who will observe and reconnoiter to right, left, etc.
g. Mission of the patrol.

7. In the message below, errors and omissions are indicated by some or all of the numbers thereon. What are these errors or omissions?

8. A rifle platoon commander issues the following order to his platoon (and attachments) but he does *not* issue it in the sequence shown.

Number each of the following statements so the order will be in the sequence you consider correct:

No.

———"This platoon with light-machine-gun squad attached is the advance party and will precede the support by not less than 600 yards.

———Our regiment marches at once on Manhattan via U. S. Highway 40, rate of march 5½ miles per hour. Our troop with attached machine guns is the advance guard.

———Remainder of platoon, column of twos in order of march: rifle squads, light-machine-gun squad.

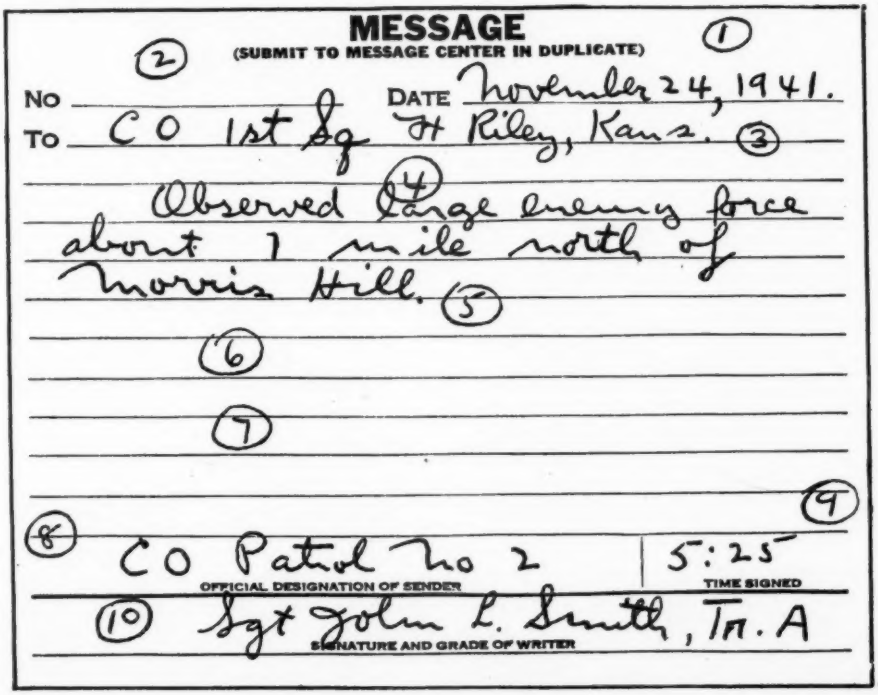
———Small hostile infantry forces are reported to be operating about ten miles north of Fort Riley.

———The first squad, Corporal A commanding, will be the point and will precede the platoon by not less than 300 yards.

———Are there any questions?

———I shall be at the head of the platoon."

*Prepared under the direction of The Department of Tactics, The Cavalry School.



MESSAGE

(SUBMIT TO MESSAGE CENTER IN DUPLICATE)

(1) (2)

No ____ DATE November 24, 1941.

To C O 1st Sq Ft Riley, Kans. (3)

(4) Observed large enemy force about 1 mile north of Morris Hill. (5)

(6)

(7)

(9)

(8) C O Patrol No 2 | 5:25

OFFICIAL DESIGNATION OF SENDER | TIME SIGNED

(10) Sgt John L. Smith, Tr. A

SIGNATURE AND GRADE OF WRITER

The 26th Cavalry (PS)

*By Captain H. J. Fleeger, 26th Cavalry**

HERE in Luzon, we are glad to see the end of the typhoon and rainy season of July, August, and September. However, in spite of torrential rains during parts of that period, the regiment accomplished a great deal. Schools for both enlisted men and officers were continuous, with special courses for cadres who are now assisting in the partial mobilization of the Philippine Army. Tactical training included a series of controlled tests for platoons and troops—which added enthusiasm to the program and provided valuable instruction for newly-arrived Reserve officers.

The coming months are usually dry and cool—the extreme heat not arriving until about February. Consequently all echelons are swinging into the routine of range firing, practice marching for condition, and Squadron and Regimental tactical problems. It is expected that the regiment will hold field exercises late in October, to be followed by Division and Department maneuvers. Every effort is being made to harden men and animals for immediate field service and to perfect the details of supply, communication, etc.

The Regiment celebrated its Organization Day October 1st; the 26th Cavalry having been formed on that day 19 years ago. On October 1st the Regiment attended mass at 6:00 AM, on the baseball diamond, and the usual regimental ceremony was held at 8:00 AM. It included invocation by the Chaplain, brief regimental history by Captain Fleeger, a short address by the Regimental Commander, Colonel Clinton A. Pierce, and benediction by the Chaplain. All troops had appropriate dinners in the troop messes. Troops G and B held dances in their barracks and NCO's had an evening party at the NCO Club. Bowling was the only sport activity because of rain. At 5:15 PM all officers assembled at the Club for an officers' party.

Horse shows have been curtailed because of training requirements and the rains but an informal show was completed in October.

Headquarters and Service Troop won the Regimental Bowling Championship—both duck and ten pins. The deciding game, against Troop G, was a close event, Troop G in the second game registering 1,026 which broke the previous regimental record of 1,009. The two teams played an exhibition game on Organization Day, October 1st, and Troop G was the winner, the prize being two cases of beer from the Headquarters and Service Troop team.

*Adjutant.

NONCOM QUIZ SOLUTIONS

1. True.
2. True.
3. False.
4. False.
5. False.
6. *b. e. f.*
7. (1) Date should be written, 24 Nov 41.
   (2) What is serial number of message?
   (3) Location of 1st Sq should be omitted as this might be of value to enemy if message fell into his hands.
   (4) How large is the force? Are they cavalry, infantry, etc? What are they doing, marching, in position, etc? If marching, in which direction?
   (5) Names of places should be printed in capital letters.
   (6) What is present location of patrol?
   (7) What will patrol leader do? Remain in observation, continue on mission, etc?
   (8) Designation should be: Leader, Patrol No. 2.
   (9) Time should be: 5:25 AM or 5:25 PM.
   (10) Signature and grade should be written: Smith, Sgt.
8. 3. 2. 5. 1. 4. 7. 6.

Has Grown Soft

Army officers, recently delving into official records of the Oregon Trail days, came across this "General Order No. 2," issued October 25, 1842, at Fort Riley, Kansas:

"First. Members of this command will, when shooting at buffaloes on the parade ground, be careful not to fire in the direction of the Commanding Officer's quarters.

"Second. The troop officer having the best trained remount for this year will be awarded one barrel of rye whisky.

"Third. Student officers will discontinue the practice of roping and riding buffaloes.

"Fourth. Attention of all officers is called to Paragraph 107, Army Regulations, in which it provides under uniform regulation that all officers will wear beards."

"The Army," sighed one officer, "has grown soft."

C.R.T.C. Weapons Training

By Major P. M. Martin, Cavalry*

THE Weapons Department of the Cavalry Replacement Training Center, Fort Riley, Kansas, has been a most interesting development and I feel that the experience gained should be shared with the other officers of our Arm. The birth took place at Camp Whitside in January, 1941, with the assignment of myself as Chief of the Department, coming from the Weapons Department of the Cavalry School. Master Sergeant Grider was the next assigned from the 14th Cavalry, then Technical Sergeant Taff from the 2nd Cavalry. The following Officers were assigned to the Weapons Department about January 15, 1941: Major F. Streicher, Major F. T. Manross, Captain G. Harrison, Captain H. F. Lovell, Captain W. S. Phinney, Captain D. L. Babcock, Captain M. C. Engel, Captain R. T. Boyle, Captain U. George, Lieutenant E. A. Maher, Lieutenant G. E. Davisson, Lieutenant R. L. Smith, Lieutenant K. A. King, Lieutenant R. Garrison, Lieutenant E. G. Buck, Lieutenant N. W. Crew, Lieutenant A. C. Hutcherson, Lieutenant B. Campbell, and Lieutenant H. J. Garrett. Since these assignments very few changes have been made. Losses: Captains George and Phinney, and Lieutenant Campbell. Gains: Majors Wallace and Nolte, and Captain Hayward.

The Commissioned Instructors were given a one months refresher course in all the Cavalry Weapons during the introductory period at Camp Whitside, thus a very firm foundation was laid for the standardization of the instruction. This course included Springfield and M-1 Rifle, mechanical training, preliminary marksmanship, and range practice; Revolver, Automatic Pistol and Cal. 30 Browning Machine Gun both light and heavy; 37-mm. Antitank Gun, 81-mm. Mortar, Cal. .45 Thompson Sub-Machine Gun, and Cal. 50 Machine Gun; some theory of fire, and gun drill; in fact the course given was very nearly the weapons course at the Cavalry School.

The Cadre of enlisted instructors were next to arrive, and were given a three weeks course in the above subjects by the Commissioned Instructors. This was a real challenge to the Reserve Officer's ability, as many of the older non-commissioned officers had years of experience with weapons. All were imbued with the desirability of a high standard of fundamental training, leaving the advance work for later. A very definite objective was gained in building a team of Commissioned and Enlisted Instructors and integrating them with the Squadron Basic Training Cadre.

The next phase was a more practical one, that of cleaning up our matériel and sighting in the M-1 Rifles. Many of the reserve officers and some of the enlisted cadre had never fired the M-1 rifle, therefore this was a golden opportunity for them. The weather was cold and raw but all entered into the work with great enthusiasm.

The first morning of instruction with the selectees was very interesting. The eight truck loads of equipment were carried out at 6:00 AM and at 7:00 AM the first group of selectees arrived. It was barely daylight, but light enough to see the tremendous numbers swarming over the dike. After twenty years of small units, two troop squadrons, and puny regiments, it was certainly inspiring to see 1,700 men march out for preliminary rifle training the first day of their course of recruit instruction. These 1,700 in the 1st group were replaced at mid-forenoon by 1,700 more and afternoon brought a similar group. From that day forward, the Weapons Department trained about 5,000 men a day.

The range season started immediately following the first two weeks of preliminary instruction. No one will ever know what feelings went through the minds of the members of the Weapons Department the first morning on the range. It was a cold, cloudy, drizzly, typical early spring day. No one had ever attempted to take recruits on the range for a full course of marksmanship at the beginning of their third week of training, much less 1,700 of them. Everyone wondered what the results would be.

That first week on the range was something to experience. Shooting in the very worst weather possible, almost freezing, raining, windy, gloomy and snowing at times, the first 1,700 qualified 52%, not bad, but of course not good. The next week, the instructors were in stride, the weather was milder and the results were better. The second 1,700 were able to average 61%. Then the last week of the range season, with many of the selectees late arrivals, but better weather and more experienced instructors, the percentage was over 70. We were able to leave the rifle season with 60% qualified of the more than 5,000 men fired, just 5 weeks after they entered training.

Pistol and machine gun instruction was carried on concurrently during the next four weeks, the cycle being two weeks. Great emphasis was placed on thorough preliminary instruction. The coach and pupil method was employed. While half the group was firing pistol, the other half was firing machine gun. The firing lines extended from Governor Harvey Canon to Pump House Canon. Difficulty was experienced with the 1918 tripod for the Browning water cooled machine gun, but this was overcome to a large extent by reversing the mount so as to place the two short legs in rear and the long leg to the front. The gun was set up very low and fired

*Chief of Weapons Department.

1—Section of the line firing for record on the 300-yard range. There are 225 targets. 2—A group of selectees receiving preliminary instruction in sighting and triangulation with the rifle. 3—Demonstrating the coach and pupil method showing the emphasis placed on the proper form in firing the pistol. 4—Preliminary instruction in rapid fire with the pistol. The range has 150 pistol targets. Ten hours instruction are given before the trainee fires for record. 5—Scene on the 1,000-inch range, there are 120 targets. Each trainee received five hours instruction.

from the prone position, rapid single shot, as a light machine gun.

An additional week of machine gun instruction was given in the 10th week in the form of field firing. The supplementary rifle and pistol season, and a rifle, pistol, and machine gun competition for the best shots in each training troop were carried on during this week.

The 11th and 12th weeks were devoted to combat training, which included a course in individual and collective use of cover, technique of rifle fire, landscape target firing, and combat firing exercises. It was very interesting to watch the combat firing exercises as a final test of all the dismounted training. Each squad was conducted to its initial point by its selectee acting corporal, then a simple combat situation was given which involved an approach under fire and the building up of a firing position. After firing was completed the selectees were moved forward to their targets for a critique and to paste their own targets. Colonel Huebner from the War Department G-3 Office, an Infantry Officer of wide experience in combat, saw some of this

training and was very complimentary, indicating that we were on the right track.

During the last week of the course a demonstration of firing with all Cavalry Weapons was put on by the department instructors. The objective of this demonstration was to show the various classes of fire employed with the many different types of Cavalry Weapons. This started with the revolver, pistol and tommy gun; continued with the M-1 rifle, light and heavy machine guns; and ended with the Cal. 50 machine guns, 81-mm. mortars, and the 37-mm. AT gun. This demonstration gave the selectees a picture of modern fire power in the Cavalry and a definite idea of the powers and limitations of the various weapons. The Motors Department assisted in this demonstration by furnishing scout cars and tanks for a demonstration of vehicular firing.

The weapons department, in coöperation with the other departments and the training squadrons, participated in the graduation exercises, which were primarily demonstrations for the public of the many phases of training taught at this center. The principal event with which the weapons department was concerned was the combat exercise, a combined attack employing about 1,800 men, a dismounted attack with about 800 men taking part, and a mounted attack with about 1,000 men and horses participating. The whole made a very impressive spectacle, the spectators were on the rimrock near Milford Gate and the attack was from the Republican River, north towards Breakneck Canon. Scout cars, tanks, and all weapons were employed in conjunction with the attack, to complete the picture of modern combat.

The period between the graduation of the first increment and the arrival of the second increment was devoted to revising schedules, reviewing instruction, reconditioning the matériel and equipment, and general reorganization. Many selectees were retained as instructors in the department, therefore these new men needed considerable training in order to prepare them to take over their instructional duties.

By transferring the poorest of the enlisted instructors as replacements a general improvement in the tone of the department was noted. Experience has vindicated our judgment in that several border line cases which were retained to give the individual the benefit of any doubt, are to be transferred at the close of the second training period.

The second training period was started July 7th. Very few changes were made in the schedule. The principal ones made were to give all day periods of instruction when classes were held at any great distance from camp. This was done with machine gun field firing, since this occurred late in the schedule and presented no great difficulty.

In the Summer period the weather conditions were much better than for the Spring period and the results were very much improved. The rifle average was raised to 72% qualified as against 60% for the first increment. How much of this improvement could be attributed to better instruction is problematical but certainly some of it should be. Some troops qualified as high as 95%, some as low as 40%, one of the latter was under one of the best instructors in the department. Perhaps some of our letters to explain by endorsement for failing to qualify 80% in years gone by, were unjustified, or the failure excusable.

The dismounted pistol qualifications showed about the same improvement as the rifle qualifications. The first increment averaged about 56% and the second about 65%. Some of this improvement was unquestionably due to milder weather but a good share of it could safely be attributed to more experienced instructors.

The machine gun instruction of the second increment was improved principally by the selection of a more suitable field firing range. One very interesting feature of this firing was the fire discipline. Automatic fire was conspicuous by its absence, where as ordinarily a great problem has been to induce the gunner to employ rapid single shot. The Browning light gun was used for this field firing. A day of firing on moving ground targets was added during this second increment. This proved to be a very interesting and profitable addition to the course, made possible by a small increase in ammunition allowance.

The combat firing for the second increment was improved greatly by using more ground. The line of departure for the problems was about 1,500 yards long, this gave an interval between individual troopers of about five yards and a reasonable interval between units. Sound records of war noises, which included sounds of dive bombers, ricochets of all types, artillery shell bursts, and machine gun fire, were played over public address systems while troops were advancing and firing. Smoke was laid down on the area and all men fired with the gas mask on. The Springfield rifle was used for this firing. Rifles were loaded with five rounds in the magazine, the bolt closed on an empty chamber, and the piece locked prior to the advance.

The graduation demonstration of the second increment culminated in an attack combat exercise with blank ammunition. This demonstration illustrated to the spectators the scope of the combat training, particularly as to technique, and made a fitting final act, showing that the objective of all the training at the replacement center is to prepare soldiers for combat.

The Cavalry can be no more effective than the men who compose it. The Weapons Department of the Cavalry Replacement Training Center considers that if every selectee leaves here with a thorough fundamental knowledge of the basic weapons, he is prepared, in this respect, to take his place in any organization in the Cavalry.

Making Motor Soldiers

By Lieutenant Allan G. Crist, Cavalry

FARMHANDS, clerks, accountants, veteran truck drivers and youngsters who never sat behind a steering wheel—they came to the Motors Department of the Cavalry Replacement Training Center at Fort Riley, Kansas. They leave the sandy flats of the Republican River 13 weeks later, as qualified scout car or truck operators, motorcyclists or "tankers." Since its birth in the bitter wintry February days of 1941, the department has turned out approximately 3,600 motor soldiers, skilled in the driving and maintenance of their vehicles under all conditions of roads, weather and light. Stress is laid on cultivating proper driving habits: ridding veteran drivers of the faults they picked up by "just learning," and getting novices on the right track toward safe, smooth operation and careful maintenance.

The department's task is three-fold: training selectees in motor operation and maintenance; handling all administrative transportation for the 6,000-man replacement training center; and the attendant upkeep of more than 200 vehicles. The "students" come from the various motors training troops, which are responsible for all phases of training except motors and weapons instruction.

Organization

The department consists of one Regular Army officer —the department head—19 Reserve officers and 109 enlisted men. A small number of Regular enlisted men served at the outset as the nucleus of the enlisted personnel. This nucleus was later augmented by the assignment of hand-picked selectees graduated from the first two increments. The Department and Detachment Headquarters, serving the usual administrative functions, together comprise six officers and 16 men. Training is conducted by the Scout Car and Bantam Divisions, each consisting of three officers and 12 NCO's; the Truck Division, four officers and 17 NCO's; Tank Division, one officer and three NCO's, and Motorcycle Division, one officer and five NCO's. One officer and 24 men are responsible for all vehicular maintenance. A Transportation Platoon of one officer and 20 men operates the Motor Pool.

Equipment

Except for a complete lack of semi-trailers and the availability of only one quarter-ton 4x4 liaison truck at this writing, the department has sufficient vehicles and shop equipment to carry out its functions.

The Truck Division operates 39 GMC 6x6's for training; the Scout Car Division, 28 M3A1's (Scout Cars); the Motorcycle Division, 22 Indian solos; and the Tank Division, three M3 light tanks and a half track. A wrecker is assigned to each division. With only one "Bantam" now on hand, the Bantam Division has been using 41 M1 Scout Cars that have seen better days. Except for the M1's, all training vehicles are 1940 or 1941 models.

The bulk of the administrative transportation consists of old 1934 to 1939 vehicles: 48 Dodge and Chevrolet 4x2's, and GMC, Dodge and Indiana 4x4's; four station wagons, eight sedans, two motor tricycles, three M1 scout cars and 25 bicycles, the latter for messenger service within the camp.

The Maintenance Division, in addition, operates a 1935 4-ton wrecker and a 1½-ton stake body truck. Approximately ten per cent of the vehicles are held out at all times for scheduled maintenance. The percentage runs higher for the M1's and the older trucks.

Training

The Number One job—training—is divided among the Scout Car, Truck, Bantam, and Motorcycle Divisions and the Tank Section.

An effort is made by the C.R.T.C. Classification Section to fit round pegs into round holes. Within each Motors Training Squadron, selctees who have driven taxis or private automobiles are assigned to one troop, for training under the Bantam Division; operators of pick-ups and other light trucks go into another troop, to become scout car drivers; former drivers of heavy trucks, school buses and semi-trailers are grouped together as prospective truck operators, and into the fourth troop go motorcyclists, caterpillar tractor drivers and automobile mechanics for training variously as truck drivers, cyclists, or "tankers."

A carefully planned schedule of lessons is followed. The first week of training is virtually a "ground school." Vehicles either are blocked-up, or parked with transfer case gearshift lever set in neutral so that the controls may be operated without turning the wheels. The trainees are first grounded thoroughly in nomenclature, vehicle inspections, safety precautions, road rules and traffic regulations, arm signals, and proper handling of controls. The second week is devoted to Primary Driving practice over open country adjacent to the Motor Park.

At the outset, each enlisted instructor must supervise the training of crews on four or more vehicles simultaneously. However, during the early stages of training, trainees are singled out to serve as assistant instructors, one for each vehicle. Each crew is divided into three groups. While one undergoes actual driving instruction, each of the others remains dismounted and is occupied with lectures or practical work on a wide variety of subjects, which include vehicle inspections,

1—Some of the Motors Department's vehicles line up at the Fort Riley Station to transport a new increment of trainees to their new home at the Cavalry Replacement Training Center on the Republican Flats. 2—Student drivers line up with their scout cars and trucks—a portion of the department's approximately 200 vehicles—on the motor park for their daily 2½-hour lesson. 3—An enlisted instructor explains a phase of maintenance to his scout-car crew. Proper care of his vehicle is impressed upon every trainee. 4—A typical obstacle confronts a student driver during the "difficult driving" phase of instruction, designed to cultivate confidence in the vehicle and ability to negotiate rugged terrain.

arm signals, convoy procedure, road rules and traffic regulations, use of the driver's trip ticket and accident report, and lubrication. Instruction is equalized by rotation of groups during each instruction period.

As the course progresses, the trainees learn to operate their vehicles across all types of terrain and in convoys. The students engage in simple combat exercises: reconnaissance missions for scout cars, bantams and motorcycles; simulated supply missions for the trucks; negotiation or removal of traps and road blocks for tanks.

Occasionally, the department is called upon to transport a thousand or more trainees to sports exhibitions or to appear in demonstrations at some near-by city. Such trips provide excellent opportunities for practice in large convoy operations, with scout cars and trucks used as personnel carriers, and motorcycles as escorts. Other opportunities present themselves to work the course of training in smoothly with the department's administrative and maintenance functions. Competent truck drivers are assigned for a week at a time to the Transportation Platoon, augmenting the platoon's small and busy regular staff. Ex-mechanics similarly get an opportunity to demonstrate their qualifications when

assigned temporarily to the Maintenance Division.

Each student's progress is checked closely. The enlisted instructors rate students weekly, as to skill in operation, knowledge of maintenance, traffic regulations and safety precautions, vehicle inspections, and general attitude. The grades are Excellent, Very Satisfactory, Satisfactory, and Unsatisfactory. After the first few weeks of training, those who have failed to maintain average progress are grouped together for special instruction under a noncommissioned officer especially selected for his patience and diplomacy. This practice develops a surprisingly high proportion of fully capable drivers out of seemingly unpromising material.

Drivers assigned to a particular type of vehicle carry through their course of instruction for that type only, except that through a system of interchange, each has a brief, "get-acquainted" session on several others. The objective is to teach a scout car driver, for instance, enough about operation of a truck that he may qualify as a truck driver with but little additional instruction. Recognizing the importance of first echelon maintenance as a trouble-preventive, the department sets aside one-third of its training time for that purpose. The first two periods of each day are devoted to instruction in operation. The third is spent entirely on tightening, servicing, and cleaning.

Out of the experience gained in training two increments of selectees, already "tooling" their vehicles across the highways of the nation for the Cavalry and the Armored Force, the department's officers and men feel confident that they are turning out a stream of Grade A motor soldiers.

Cavalry Replacement Training Center*

THIRTY-SIX organizations participated in the distribution of the trainees of the second increment. It was impossible to fill all requisitions for replacements completely because of the transfer of 1,053 trainees, who were over 28 years of age, to the Enlisted Reserve Corps. The replacements actually shipped were as follows (White):

2d Cavalry Division, Fort Riley, 861; 4th Cavalry, Fort Meade, 329; Fort Leonard Wood, 15; 1st Cavalry Division, Fort Bliss, 546; 124th Cavalry, Fort Brown, 58; 112th Cavalry, Fort Clark, 516; 56th Cavalry Brigade, Fort McIntosh, 49; 113th Cavalry, Camp Bowie, 347; Finance Detachment, Randolph Field, 2; 6th Cavalry, Fort Oglethorpe, 118; 11th Cavalry, Camp Lockett, 9; 11th Cavalry, Camp Seeley, 12; 115th Cavalry, Fort Lewis, 144; 107th Cavalry, Camp Forrest, 13; 3d Cavalry, Fort Myer, 257; A Troop, 252d Q.M. Squadron, Fort Reno, 69; 2d Reconnaissance Troop, Ft. Sam Houston, 4; and 4th Reconnaissance Troop, Fort Benning, 47.

Corps Area Service Commands: Fort Snelling, 47; Camp J. T. Robinson, 19; Fort Robinson, Nebr., 1; Hot Springs, Ark., 1; Fort Crook, 3; Fort Omaha, 2; Fort DesMoines, 58; Fort Leavenworth, 127; Fort Sheridan, 6; and Fort Custer, Mich., 24.

Colored Trainees: 4th Brigade and Cavalry School, 234; Corps Area Service Commands: U.S.M.A., West Point, 3; Fort Leavenworth, 19; Fort Myer, 2; Q.M. Det., Flying School, Mather Field, 13; Q.M. Det., Flying School, Tuskegee, 8; Q.M. Det., Flying School, Bakersfield, 13; and Q.M. Det., Gunnery School, Las Vegas, 2.

* * *

The two new chapels were dedicated October 17th in an impressive ceremony in which Brigadier General Chamberlin cut the ribbon officially opening them for service.

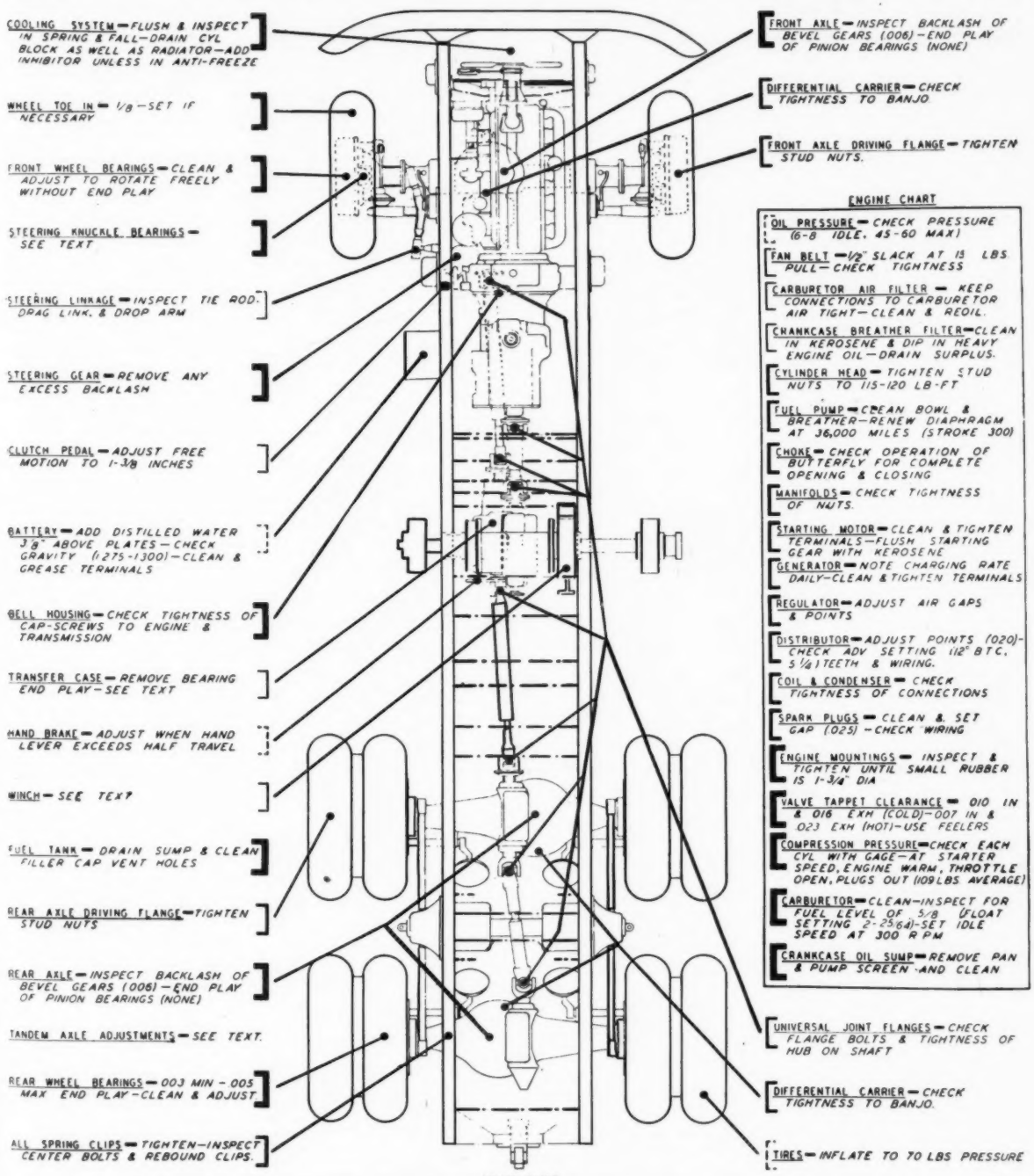
Distinguished visitors to the Center have included: Assistant Secretary of War, Hon. John J. McCloy and his Aide, Lt. Col. Ralph Tate; Brigadier General Sherman Miles, G-2, War Department; Lt. Col. E. M. Sumner, Office of the Chief of Cavalry; Brigadier T. N. F. Wilson, Major G. N. Fairbanks and Capt. P. Arkwright of the British Army.

The following offiers have joined the command since September 1st: Colonel Oliver I. Holman; Captains Emery D. Stoker, Robert W. Castle, John E. Reilly, Russell E. Doty; First Lieutenants George H. Dalton, Harold J. Tyndall, William L. Blake, Newton G. Place, John G. Adams, George A. Pearson, Jr., John J. Marron, Murray F. Sweet; Second Lieutenants Carroll T. Neal, Jr., Max E. Moe, Robert S. Murliss, Tom P. Mee, Harold E. Stambaugh, Herman P. Hightower, Casamis L. Leonard, Brewster Perry, Robert L. Montague, Glyndon O. Loomer, Dale Rader, John J. Spillman, Nando L. Necci, Thomas F. White, and Stanley E. Fields.

The following officers have departed: Brigadier General Harry D. Chamberlin, Major James E. Murphy, Captain Floyd C. Lyon; First Lieutenants Newton G. Place and John D. Adams; Second Lieutenants James M. Scott, Millard F. Caldwell, Roy A. Davis, Davis Martin, Glen O. Richardson, Helmer Julius Uglum, Hawthorne Hughes, William L. White, Arthur T. Yates, Harold E. Armstrong, Lawrence G. Graber, Eldon F. Hubin, Harold B. Mackenzie, William H. Walner, Samuel S. Wortham, Jr., Charles T. Leverett, Michael Boyer, Joe Kolesar.

*Brigadier General Donald A. Robinson, Commanding.

Typical Adjustment Diagram for a 6 x 6 Truck


COOLING SYSTEM — FLUSH & INSPECT IN SPRING & FALL — DRAIN CYL BLOCK AS WELL AS RADIATOR — ADD INHIBITOR UNLESS IN ANTI-FREEZE
WHEEL TOE IN — 1/8 — SET IF NECESSARY
FRONT WHEEL BEARINGS — CLEAN & ADJUST TO ROTATE FREELY WITHOUT END PLAY
STEERING KNUCKLE BEARINGS — SEE TEXT
STEERING LINKAGE — INSPECT TIE ROD, DRAG LINK, & DROP ARM
STEERING GEAR — REMOVE ANY EXCESS BACKLASH
CLUTCH PEDAL — ADJUST FREE MOTION TO 1-3/8 INCHES
BATTERY — ADD DISTILLED WATER 3/8" ABOVE PLATES — CHECK GRAVITY (1.275-1300) — CLEAN & GREASE TERMINALS
BELL HOUSING — CHECK TIGHTNESS OF CAP-SCREWS TO ENGINE & TRANSMISSION
TRANSFER CASE — REMOVE BEARING END PLAY — SEE TEXT
HAND BRAKE — ADJUST WHEN HAND LEVER EXCEEDS HALF TRAVEL
WINCH — SEE TEXT
FUEL TANK — DRAIN SUMP & CLEAN FILLER CAP VENT HOLES
REAR AXLE DRIVING FLANGE — TIGHTEN STUD NUTS
REAR AXLE — INSPECT BACKLASH OF BEVEL GEARS (006) — END PLAY OF PINION BEARINGS (NONE)
TANDEM AXLE ADJUSTMENTS — SEE TEXT.
REAR WHEEL BEARINGS — 003 MIN - 005 MAX END PLAY — CLEAN & ADJUST
ALL SPRING CLIPS — TIGHTEN — INSPECT CENTER BOLTS & REBOUND CLIPS.
FRONT AXLE — INSPECT BACKLASH OF BEVEL GEARS (006) — END PLAY OF PINION BEARINGS (NONE)
DIFFERENTIAL CARRIER — CHECK TIGHTNESS TO BANJO
FRONT AXLE DRIVING FLANGE — TIGHTEN STUD NUTS.
ENGINE CHART
OIL PRESSURE — CHECK PRESSURE (6-8 IDLE, 45-60 MAX)
FAN BELT — 1/2" SLACK AT 13 LBS PULL — CHECK TIGHTNESS
CARBURETOR AIR FILTER — KEEP CONNECTIONS TO CARBURETOR AIR TIGHT — CLEAN & REOIL.
CRANKCASE BREATHER FILTER — CLEAN IN KEROSENE & DIP IN HEAVY ENGINE OIL — DRAIN SURPLUS.
CYLINDER HEAD — TIGHTEN STUD NUTS TO 115-120 LB-FT
FUEL PUMP — CLEAN BOWL & BREATHER — RENEW DIAPHRAGM AT 36,000 MILES (STROKE 300)
CHOKE — CHECK OPERATION OF BUTTERFLY FOR COMPLETE OPENING & CLOSING
MANIFOLDS — CHECK TIGHTNESS OF NUTS.
STARTING MOTOR — CLEAN & TIGHTEN TERMINALS — FLUSH STARTING GEAR WITH KEROSENE
GENERATOR — NOTE CHARGING RATE DAILY — CLEAN & TIGHTEN TERMINALS
REGULATOR — ADJUST AIR GAPS & POINTS
DISTRIBUTOR — ADJUST POINTS (020) — CHECK ADV SETTING (12° BTC, 5 1/4) TEETH & WIRING.
COIL & CONDENSER — CHECK TIGHTNESS OF CONNECTIONS
SPARK PLUGS — CLEAN & SET GAP (025) — CHECK WIRING
ENGINE MOUNTINGS — INSPECT & TIGHTEN UNTIL SMALL RUBBER IS 1-3/4" DIA
VALVE TAPPET CLEARANCE — 010 IN & 016 EXH (COLD) — 007 IN & 023 EXH (HOT) — USE FEELERS
COMPRESSION PRESSURE — CHECK EACH CYL WITH GAGE — AT STARTER SPEED, ENGINE WARM, THROTTLE OPEN, PLUGS OUT (109 LBS. AVERAGE)
CARBURETOR — CLEAN — INSPECT FOR FUEL LEVEL OF 5/8 (FLOAT SETTING 2-25/64) — SET IDLE SPEED AT 300 R P M
CRANKCASE OIL SUMP — REMOVE PAN & PUMP SCREEN AND CLEAN
UNIVERSAL JOINT FLANGES — CHECK FLANGE BOLTS & TIGHTNESS OF HUB ON SHAFT
DIFFERENTIAL CARRIER — CHECK TIGHTNESS TO BANJO.
TIRES — INFLATE TO 70 LBS PRESSURE

BRAKE CHART

RESERVOIRS — OPEN DRAIN COCK TO REMOVE MOISTURE & SLUDGE.	ALL SLACK ADJUSTERS — SEE TEXT.	ALL BRAKE CHAMBERS — CHECK FOR LEAKAGE — RENEW DIAPHRAGMS AT LEAST ONCE A YEAR
ALL BRAKE SHOES — SEE TEXT.	GOVERNOR — CHECK FOR LEAKAGE AND TO LOAD AT 80-85 & UNLOAD AT 100-105 LBS — CLEAN AIR STRAINER — CHECK GAGE	TUBING & FITTINGS — CHECK UNDER PRESSURE FOR LEAKAGE.
AIR COMPRESSOR — CHECK TIGHTNESS OF MOUNTING — CLEAN AIR FILTER — CHECK OIL PRESSURE (6-8) IDLE, 45-60 MAX) — CHECK DISCHARGE VALVE LIFT (042) — CHECK UNLOADER TAPPET CLEARANCE (012).	APPLICATION, RELAY, & RELEASE VALVES — CLEAN FILTER — CHECK FOR LEAKAGE & PROPER OPERATION — RENEW DIAPHRAGMS AS REQUIRED	SAFETY VALVE — TEST TO OPEN AT 150 LBS.

DAILY | 1000 MILE PERIOD | 6,000 MILE PERIOD | SPRING & FALL

*Chart furnished by courtesy of *The Army Motors*, Holabird QM Depot, Baltimore, Maryland.

A Private Views "Graduation"

By Private Yale Soifer

Some men never will give to life
Their sacrifice and pain,
Yet other men will face the strife
In order to live again. . . .

IN a little while the sun will be setting on the close of another training period for thousands of men from all walks of life. From office, shop, school and prairie we were drawn together and united into a common purpose and a common way of life. For thirteen weeks our bodies and minds were adjusted to the myriad tempos of army cavalry life, to the rush of strange and bewildering horses, the strain of the march, the patient intensities of combat drills. Pale, sunless faces took on a bronzed and hardened form, lungs and tissues dead for years began to live again, hands that trembled from the smoke and nerves of civilian life became steady with their new strength.

No one of us could deny the physical reward of our new life. No one of us who really sought within themselves the meanings of it all could deny the mental reward of comprehending the common, universal cause for which we endured.

"There are reasons for all things," is something we all had to learn at the beginning. To follow an order though oblivious to its goal. To snap into action when every urge was to draw back. To discipline ourselves for the good of the whole. Some of us bit back at this strange philosophy that had enveloped us, "griped," cussed, resented, but as the weeks unfolded there was less of this. More of us were suddenly awakening to the full impact of the *why* of our existence. The horse and gun became a part of each man and were mastered, the charge became symbolical, and every tissue of our bodies echoed its challenge to the day. *Graduation!*

Yes, there was a lot of "Hell-this!" and "Damn-that!" but beneath it all the better man was showing. So many of us had never realized the actual existence of "John Doe," the other guy. The other guy that bunked next to us, sweated, washed, ate, fought, swore with us. We talked different, thought different, but time passed and the man next to us began to have some meaning in our lives. More and more we understood and were tolerant. From the seeds of barracks and field, men were coming into their own.

Civilian newspapers write daily of "damaged morale," of "poor *esprit de corps*," and similar stuffings. Letters from home speak of so-and-so's son being mistreated on K.P., of Pvt. Joe Bloke's having to scrub a stable wall, of "how terrible it is you boys have to suffer so much."

Rubbish! and more rubbish! There is actually no more "griping" in this man's army than man has eternally "griped" throughout the ages when he comes home from a hard day at the office or shop. As for "morale," it can never be guaged by the mediocre complaints we see everywhere. Only by the reaction of the soldier to his training and how well he retains the techniques of that training can we judge. The fact that our men are being turned out full-fledged cavalrymen, bewildered no longer by the horse, gun or the combat, is truth enough of the inherent solidarity of army "morale."

Soon we pass on to regular cavalry posts for active duty. Another new day faces us when the train pulls in and we dismount. This time our eyes can look at the sun, our hands can grab life more solidly, and the understanding of the vastness of our mutual cause is more firmly resolved.

Morale

A good soldier's morale is something like a lady's virtue—you don't talk about it; but there has been so much said about it recently that I want to add my bit. About all we must rid ourselves of the notion that morale is achieved by giving somebody something. Real morale is more readily achieved by depriving soldiers of something rather than by giving them something. Hostesses, movies, soda fountains and what have you, have their place, but endurance of hardship, sacrifice, competition, ability to outdo another unit, the feeling of inner strength—in short, the knowledge that he is tough, hardbitten, and able to take and inflict stiff blows, gives the soldier morale, and the more he has to put up with things and overcome obstacles, the more it develops.—*Honorable John J. McCloy, Assistant Secretary of War, Sept. 19, 1941.*

Book Reviews

ARMIES ON WHEELS. By S. L. A. Marshall. William Morrow & Co., New York. Maps and index. 1941. 251 pages. $2.50.

Mr. Marshall's *Blitzkrieg* (published in November, 1940) stands as the authoritative short interpretation of the present European war up to the Battle of Britain.

Now in *Armies on Wheels* the author studies the significant campaigns since Dunkirk, with particular emphasis on what they teach us about the ideal army for an offensive or defensive modern war.

Mr. Marshall sustains his uncompromising position against a completely independent air force by reference to what has actually happened during the past two years of war. He points out that the greater the mobility of an army, the greater the need for perfect integration and coördination. He advocates a much closer organization of infantry and artillery than we now have—"The air force officer who has a low opinion of infantry thwarts the principle of coöperation and opens the door to such tragedies as the one at Crete."

As to cavalry, the following excerpt is quoted:

"Horse cavalry participated in the fighting along fronts where armored power could not make headway. There was effective use of cavalry by the Greek army during the advance into Albania as well as by the British in the Syria Campaign."

"The Armored Force officer who scoffs at the idea that cavalry has any place in war fails to reckon with the fact that there is no other arm so well fitted to cope with the modern problem of the mass exodus of civil populations from cities under air bombing, which chokes the maneuver of the defender and makes possible the act of annihilation. Long-distance reconnaissance, the masking of an infantry advance, the cavalry charge—these uses of cavalry have been relegated to limbo by the rise of air and mechanized power, and the authority of the automatic weapons. But so long as disorder is the inevitable accompaniment of war, and so long as there are flanks toward which motorized vehicles cannot travel because of the forbidding nature of the ground, cavalry will have its distinct uses.

> "On August 17, 1941, on the Leningrad front a regiment of Russian cavalry routed two battalions of German SS troops and drove them back ten miles during a German attempt to extend the position by a night march. The horsemen, dismounting for battle, wore white arm bands to distinguish themselves from the enemy in the dark, after coming in on the German flank.

"We have all heard about the need for mobility in war until we are ready to gag on the subject, but little account has been taken of the difference between mobility and speed. In this difference is to be found the key to the future. Battlefield mobility, which is more important than the ability to move fast, is still the talisman of military success. Battlefield mobility, however, is merely the dynamic of an essential tactical unity. Speed itself solves none of the problems of war. If the race were always to the swift, then long before now the airplane would have blotted out the last land army even though on the ground it is tactically the least mobile of all weapons. The principles of war remain unchanged. Economy of force, concentration, surprise, security, offensive action and coöperation hold good whether an army is composed of foot soldiers, horse soldiers or machine soldiers. The attainment of certain of these ends (concentration, security) has been made more difficult by motorization, and rapid movement and speed themselves run counter to the efficient articulation of the entire force."

The author's chapter, "Tanks Can Be Stopped," is particularly noteworthy.

Only a student who had been a soldier could so accurately differentiate between that which is true and false in this kaleidoscopic era of total warfare, and what America should do about it.

* * *

GREAT SOLDIERS OF THE TWO WORLD WARS. By H. A. De Weerd. W. W. Norton & Co., New York. Illustrations, maps and index. 1941. 378 pages. $3.50.

The author is editor of *Military Affairs* and a writer whose contributions to military journals are regarded as among the most significant now appearing. In *Great Soldiers* he presents biography as military history, brilliantly illuminating the men and events that have shaped the destiny of our time.

SCHLIEFFEN, HINDENBURG, HOFFMANN, KITCHENER, LAWRENCE, PERSHING, PETÁIN, GAMELIN, CHURCHILL, WAVELL, SEECKT, HITLER, and others.

One in the profession of arms has but to scan the chapter contents to appreciate the importance of including this volume in every military library.

* * *

THE IMPACT OF WAR: Our American Democracy Under Arms. By Pendleton Herring. Farrar & Rinehart, New York. Index. 1941. 306 pages. $2.50.

What is the full significance of the phrases Total War and Total Defense that have become such a part of our daily speech? What do they imply in the conduct of our affairs as a democratic nation? How do they affect democratic government? How have we carried out our military affairs in the past and maintained our democratic tradition? How does our government today prepare to meet the military challenge of totalitarian might?

These are questions raised and answered by the author in this brilliant exposition as he describes American democracy under arms in the present crisis and against a background of 150 years of military history.

It is good food for provocative thought!

NOT ALL WARRIORS. By Captain William H. Baumer, Jr. Smith and Durrell, New York. Bibliography and index. 1941. 313 pages. $2.50.

This is a book of biographies about seven West Pointers who left their indelible impact on American civilization.

Few people are aware of the fact that over fifty per cent of the graduates of the United States Military Academy in the 19th Century entered civil life at some stage of their careers. For example, during the period 1802-1901, 2,371 of the 4,121 graduates found civilian occupations. These included one President of the Nation, The President of the Confederate States, three presidential candidates, four cabinet members, one ambassador, twenty-eight diplomatic officials, thirty-four members of Congress, sixteen state governors, one bishop, fourteen judges, seventy-seven members of state legislatures, seventeen mayors of cities, forty-six presidents of railroads and other corporations, two hundred twenty-eight civil engineers, two hundred attorneys, one hundred seventy-nine authors and numerous merchants and planters.

Of this imposing group of West Pointers, however, the author has chosen but seven to prove his thesis. One of our finest American painters, James McNeill Whistler; one of our greatest writers, Edgar Allan Poe; the head of the Confederate States, Jefferson Davis; a diplomat, Horace Porter; a manufacturer, Henry du Pont; the fighting bishop of the Confederate States, Leonidas Polk; and an explorer, Benjamin Louis Eulalie de Bonneville.

This would make a nice gift book for any library.

* * *

THE SOLDIER AND THE LAW. By John A. McComsey and Morris O. Edwards. The Military Service Publishing Co., Harrisburg, Penna. Index and supplement. 1941. 401 pages. $1.50.

For practical assistance in the application of the *Manual for Courts-Martial* this book is worth its weight in gold!

The following quoted preface clearly and concisely gives the mission of this volume:

"The mission of this book is two-fold: (1) to prevent military delinquency; (2) to provide practical assistance for those concerned in the efficient administration of military justice. Part One ('Trial Prevention') and Section B of the Supplement ('A Suggested Explanation of the Articles of War') have been devoted to the first objective. The rest of the book, including Parts Two and Three, the Appendices. and Section A of the Supplement ('Outline of Procedure before Courts-Martial') have all been devoted to the second objective. The authors have attempted through the use of practical illustrations, various practical charts, forms, and check lists to make as mechanical as possible the purely procedural aspects of military justice. It is hoped thus to save valuable time, to avoid costly errors and embarrassment, and to assure that justice is duly administered 'without partiality, favor, or affection.'

"It should be emphasized that this book is not intended in any way as a substitute for the *Manual for Courts-Martial,* but rather as a supplement to it. This volume is not in any sense an official publication, although every effort has been made to check the correctness of statements made herein, and frequent excerpts from various War Department publications are employed."

WHAT THE CITIZEN SHOULD KNOW ABOUT OUR ARMS AND WEAPONS. By Major James E. Hicks. W. W. Norton & Co., New York. 100 Illustrations. Index. 1941. 252 pages. $2.50.

Interested in weapons? Well, whether a civilian or a soldier, this book gives authoritative practical information of the purpose and functions of every sort of weapon from the pistol to the heaviest coast artillery—machine guns from Gatlings to Brownings; famous types of cannon, 75-mm. howitzers, modern mortars and antiaircraft; types of armored combat vehicles; aircraft armament, bombs, etc.

The author is a major, Ordnance Department, Army of the United States.

* * *

WHAT THE CITIZEN SHOULD KNOW ABOUT THE MARINES. By Captain John H. Craige. W. W. Norton & Co., New York, 1941. 211 pages. $2.00.

This is another one of the descriptive and informative *citizen's series* that compares well with the others. Remember them? *What the citizen should know about: The Army; The Navy; The Coast Guard; The Merchant Marine; Civilian Defense;* and *Our Arms and Weapons.*

The author of The Marines' volume, formerly editor of the *Marine Gazette* and retired because of injuries incurred in line of duty, is a Captain of the U. S. Marines—the shore-fighting service of our navy that is becoming more vitally important as the technique of modern war develops.

Captain Craige interestingly tells of the history, organization and mission of the famous corps of "Leathernecks," of their life afloat, and detached on assignments in far-flung outposts. This, and many other enlightening and convincing details strengthen our belief that "the Marines still have the situation well in hand."

* * *

CENSORSHIP 1917. By James R. Mock. Princeton University Press, Princeton, N. J., Summary of Sources and index. 1941. 250 pages. $2.50.

Like Mr. Mock's extraordinary volume, *Words That Won the War,* which he wrote in collaboration with Cedrick Larson, this remarkable book is based upon a great mass of hitherto unpublished material from the National Archives in Washington, as well as his thorough acquaintance with sources used by other scholars.

The author holds no brief either for or against wartime censorship; he accepts it as inevitable in some form in modern war. He is interested above everything else in the effect of wartime censorship *after the war is over* and effectively warns against selfish groups and individuals who may attempt to prolong the "emergency."

Censorship 1917 has a direct message for Americans at the present moment because it is the profoundly important story of America's censorship experience in World War One—with the Censorship Board established by President Wilson— accompanying cable and mail censors to their far flung bases—watching the excision of movie film as Hollywood swings into line behind our national war effort—a peek over the shoulder of the unit commander as he censors the soldiers' mail. It is facinating to read and gives a clear insight into the subject of Censorship (1942?).

HE'S IN THE ARMY NOW. By Captain William H. Baumer, Jr. Robert M. McBride & Co., New York. 1941. Profusely illustrated. 255 pages. $2.50.

What to give the trainee for Christmas? Here is the answer. It will be a fine souvenir of his tour in the Service, for it illustrates what part John Doe is playing in this great new weapon of defense—our National Army—and in what camp he is learning to master the complexities of modern warfare. From a practical standpoint it is extremely informative and instructive. In both text and picture *He's in the Army Now* supplies the dramatic answer.

While this volume is in no sense an official government publication, much of the data obviously has been taken from United States Army publications. It traces the trainee from the day of induction through the Reception Center, Replacement Training Center and his service in the varied branches of the army—the Infantry, Cavalry, Air Corps, Field and Coast Artillery, Armored Force, Signal Corps, Corps of Engineers; and in the services—the Quartermaster Corps, Ordnance and Medical Departments.

Later we find our trainee a full fledged soldier on maneuvers when the coördination and coöperation of all elements of the Army are made effective as a combat team.

Pictured also is the less serious side of Army life—the games and sports, the entertainments and dances and the contagious horse-play which have contributed so much in moulding our great new American Army.

* * *

CURRENT SPANISH. By Jose Martinez. The Paulist Press, New York. 1941. $1.00.

Reviewed by Lieutenant Colonel E. M. Benitez, G.S.C.

Current Spanish, as the title implies, is a practical and simplified textbook designed to meet the needs of the student who wishes to acquire a speaking knowledge of the language without delving into the intricacies of its grammar.

The author is one of our ablest teachers of modern languages and a recognized authority on his native tongue. His present position as instructor of Spanish at the United States Military Academy has given him a keen concept of the army's requirements. This textbook is unique because, in addition to a complete compilation of modern conversational material, it contains military terminology which would be difficult to find in any other work.

This attractive little pocket-style edition should thus be an invaluable reference book for the scholar who is making a comprehensive study of Spanish, as well as for the beginner with limited time to devote to the subject.

* * *

ON GUARD. By Joseph R. Sizoo. The Macmillan Co., New York. 1941. $1.00.

While this book treats with the spiritual side of life it is different from many of similar nature. It deals with the very questions with which people in all walks of life are being confronted during these hectic war days. It should be in the library of every army and navy chaplain. There is a spiritual message for each of the 365 days in the year.

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Horse Feathers

Furlough

"Dear Father: Please send me a cheque.
I dallied last night with a deque;
What little I knew
Didn't carry me threw
And I got it, alas, in the neque!"

* * *

"Dear Son: I am just out of cheques.
Pray beware the physical wreques
That probably knew
A heap more than yew
Of cards and the opposite seques!"

* * *

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War Department Changes

Cavalry Personnel

(From September 6, 1941 to November 15, 1941)

Captain Raymond C. Adkisson, Ft. Bliss, Tex.. to Hq., Second Air Support Command, Oklahoma City, Okla.

First Lieutenant Joe Ahee, relieved 3rd Armored Div., Camp Polk, La.; assigned as assistant military attaché, Cairo, Egypt.

Lieutenant John H. Aldinger, from Fort Sheridan, Ill., to Panama Canal Dept.

Lieutenant Walter V. Baker, from Ft. Sheridan, Ill., to Panama Canal Dept.

Captain William G. Bartlett, from Philippine Dept., to 1st Cav. Div., Fort Bliss, Tex.

Lieutenant Colonel William T. Bauskett, Jr., retired, January 31, 1942, at own application.

Captain R. H. Bayne, relieved detail in Q.M.C., and Fort Ord, November 20; assigned 4th Cav., Fort Meade, S. Dak.

First Lieutenant William F. Beaty, from Ft. Leonard Wood, Mo., November 30, to 3rd Armored Div., Camp Polk, La.

First Lieutenant Henry G. Bell, from Ft. Benning, Ga., October 10, to faculty, Cav. School, Ft. Riley, Kan.

Lieutenant Colonel H. W. Benson will retire, physical disability, October 31.

Second Lieutenant Frank R. Bertero, from Ft. Bliss, Tex., to Cav. Rep. Tr. Cen., Ft. Riley, Kan.

Colonel J. K. Brown, upon his own application, will retire December 31, act of June 13, 1940; relieved Fort Bliss that date.

Major R. A. Browne, relieved 2d Cav. Div., Fort Rilev, October 6; assigned Cav. R.T.C., that station.

Lieutenant Colonel H. DeB. Bruck, relieved Walter Reed General Hospital, Washington, D. C., and assignment at Camp Lee, Va.; to proceed home and await retirement.

Lieutenant Colonel Ralph H. Cameron, from Ft. McIntosh, Tex., to asst. const. QM, Zone VIII, Ft. Sam Houston, Tex.

First Lieutenant Samuel W. Carder, Jr., from Ft. Knox, Ky., to 12th Obs. Sqdn., Ft. Knox, Ky.

Captain Robt. W. Castle, from Washington, D. C., October 1, to Cav. Repl. Tr. Cen., Ft. Riley, Kan.

Captain Wm. E. Chandler, from Philippine Department, to 2nd Armd. Div., Ft. Benning, Ga.

Colonel F. K. Chapin, assigned command of Plattsburg Bks., effective upon reporting thereat.

Major Chester A. Clark, from Ft. Riley, Kan., to Philippine Dept., sail December 17, San Francisco, Calif.

Second Lieutenant Clarence W. Cleveland, from Pine Bluff, Ark., November 5, to AC pilot course, AC tr. det. School of Aviation, that station.

Colonel J. K. Cockrell, detailed as member of G.S.C.; assigned G.S. with troops, and C.Z., sailing from New Orleans November 25; relieved Hq., 3d C.A., Baltimore; to report for temporary duty in office, A. C. of S., G-2, Washington, D. C.; previous orders amended.

First Lieutenant Haskell C. Cohen, Fort Riley, Kan., to 2nd Cav. Div., that station.

Lieutenant Colonel Beverly H. Coiner, from Ft. Sam Houston, Tex., November 1, 3rd Arm. Div., Camp Polk, La.

Captain Loren F. Cole, from Ft. Benning, Ga., to home to await retirement.

Captain John A. Conway, from Ft. Riley, Kan., October 25, to Armored Force Rep. Tr. Cen., Ft. Knox, Ky.

Lieutenant Colonel C. B. Cox, relieved 15th Cav., Fort Lewis; assigned 1st Cav. Div., Ft. Bliss.

Lieutenant Colonel R. E. Craig, upon his own application, will retire December 31, act of June 13, 1940; relieved Camp Claiborne, La., that date.

Major M. B. Crandall's orders amended to assign him Hq., Air Force Combat Command, Bolling Field.

Lieutenant Colonel R. L. Creed, relieved 1st Cav. Div., Fort Bliss· assigned Cavalry Board, Fort Riley.

Lieutenant Colonel Gersum Croander, relieved 6th Cav., Fort Oglethorpe, October 10; assigned 4th C.A. Service Command, that station.

Second Lieutenant George C. Critchlow, Fort Riley, Kan., October 10, to Faculty, Cav. Sch., that station.

First Lieutenant Allan G. Crist, from Fort Riley, Kan., December 6, to 3rd Armored Div., Camp Polk, La.

First Lieutenant Richard H. Curtis, Fort Riley, Kan., October 30, to 2nd Cav. Div., that station.

First Lieutenant Raymond W. Darrah, from Ft. Brown, Tex., October 10, to Cav. Rep. Tr. Cen., Ft. Riley, Kan.

Lieutenant Colonel C. E. Davis, relieved 4th C.A. Service Command, Fort Oglethorpe, October 10; assigned Cav. R.T.C., Ft. Riley.

Lieutenant Colonel F. C. De Langton, upon his own application, will retire February 28, act of June 13, 1940; relieved Ft. Brady.

Major L. LaC. Doan, relieved Fort Riley, October 15; assigned 3d Armored Div., Camp Polk, La.

Second Lieutenant Charles W. Dowel, from Ft. Ord, Calif., September 22, to Army Air Forces, 2nd Air Depot Group, McClellan Field, Calif.

Second Lieutenant James F. Dreitzer, from Ft. Riley, Kan., to 4th Armd. Div., Pine Camp, N. Y.

Captain Walter J. Easton from Camp Forrest, Tenn., to Cav. Rep. Tr. Cen., Ft. Riley, Kan.

Colonel H. M. Estes, relieved office, C. of Cav., Washington, D. C., September 30; assigned 3d Cav., Fort Myer.

Second Lieutenant Irwin F. Evans, from Camp Seeley, Calif., to Armored Force Sch., Fort Knox, Ky.

Second Lieutenant R. J. Fate, relieved A. C. T. Det., Southwest Airways, Inc., Glendale, Ariz.; assigned 4th Armored Div., Pine Camp, N. Y.

Lieutenant Colonel F. W. Fenn, relieved 4th Armored Div., Pine Camp, N. Y.; assigned Hq., 1st Air Support Command, Mitchel Field.

Second Lieutenant Stanley E. Fields, Fort Myer, Va., to Cav. Rep. Tr. Cen., Ft. Riley, Kan.

First Lieutenant George F. Fisher, Jr., from Godman Field, Ky., to AC Adv. Fly. Sch., Brooks Field, Tex.

Colonel H. L. Flynn, relieved detail as member of G.S.C., assignment G.S., with troops, and Hq., 3d C.A., Baltimore, October 15th; assigned Cav. Board, Fort Riley.

Lieutenant Robert E. Foy, from Ft. Knox, Ky., September 12, to inactive status.

Captain William F. Fratcher, from Detroit, Mich., to off. JAG, Washington, D. C.

Lieutenant Colonel Geoffrey Galwey, relieved U. S. A. T. *Roosevelt*, New York Port of Embarkation Hq., that port.

Captain John F. Gibbons, Jr., Brooks Field, Texas, to Maintenance Command Subdepot, that station.

Lieutenant Colonel H. B. Gibson, detailed in I. G. D., October 1, relieved 1st Cav. Div., Fort Bliss; assigned Hq., 7th Inf. Div., Fort Ord.

Second Lieutenant Charles E. Goetz, from Ft. Bliss, Tex., to Philippine Dept., sail November 20, San Francisco.

Lieutenant Colonel S. R. Goodwin, assigned with A.G.D., November 30; relieved 4th Armored Div., Pine Camp, N. Y.; assigned A.G.O., Washington, D. C.

Colonel W. W. Gordon, relieved 3rd Cav., Fort Myer, September 30; assigned 3d C. A. Service Command, Fort Myer.

First Lieutenant William P. Gray, from Camp Roberts, Calif., to off. C. of S., Washington, D. C.

Captain Brendan McK. Greeley, Ft. Oglethorpe, Ga., to Hq., First Air Support Command, Mitchel Field, N. Y.

Second Lieutenant J. D. Green (now First Lieutenant, Army of the U. S.), transferred to Infantry on October 17; relieved 11th Cav., Camp Seeley, Calif.; assigned 7th Inf. Div., Fort Ord.

Lieutenant Colonel W. T. Haldeman, relieved Kansas City, Mo., November 1; assigned St. Louis.

Lieutenant Colonel Ernest N. Harmon, from Washington, D. C., November 1, to acting C. of S., Armored Force, Ft. Knox, Ky.

Major James L. Hathaway, Camp Seeley, Calif., to Hq., Fourth Air Support Command, Hamilton Field, Calif.

Colonel Arthur W. Holderness, from Presido of San Francisco, Calif., November 15, to U. of Ariz., Tucson, Ariz.

Lieutenant Colonel O. L. Holman, relieved New Mexico Military Inst., Roswell; assigned Cav. Repl. Training Center, Fort Riley.

Lieutenant Colonel H. G. Holt's orders amended to assign him 3rd Armored Div., Camp Polk, La.

Captain Thomas R. Houghton, from Fort Clark, Tex., October 5, to 3rd Armd. Div., Camp Polk, La.

Major C. B. Hutchinson's orders amended to relieve him Hq., 2nd C.A., Governors Island, December 1.

Lieutenant Colonel W. G. Ingram, relieved recruiting, Indianapolis, November 5; assigned C.C.C., Fort Benj. Harrison.

Captain Wm. I. Irby, Washington, D. C.,

to Air Service Command, Bolling Field, D. C.

First Lieutenant Newton E. Jarrard, from Pine Camp, N. Y., to 91st Obs. Sqdn., Pine Camp, N. Y.

First Lieutenant Carl L. John, from Fort Knox, Ky., to off. C. of S., Washington, D. C.

First Lieutenant George Johnson, Jr., Fort Benning, Ga., to asst. post utilities off., that station.

Colonel Byron Q. Jones, prior orders amended, from Ft. Bliss, Tex., to Hq., 6th Army Corps, Providence, R. I.

Second Lieutenant Richard D. Kelly, from Camp Polk, La., to Cav. Sch., Ft. Riley, Kan.

First Lieutenant Charles H. Kenworthy, from Indiantown Gap Military Res., Pa., to faculty, S.C. School, Ft. Monmouth, N. J.

Second Lieutenant Joseph M. Kirchheimer, from Fort Riley, Kan., October 10, to 4th Armored Div., Pine Camp, N. Y.

Captain Harold C. Kirchner, from Fort Jackson, S. C., to Cav. Rep. Tr. Cen., Fort Riley, Kan.

Captain Edward B. Kirk, from Fort Devens, Mass., December 1, to instr., Command and GS Sch., Ft. Leavenworth, Kan.

Lieutenant Wm. F. Kistler, from Fresno, Calif., to Hq., Army Air Forces, Washington, D. C.

Second Lieutenant J. F. Kreitzer, relieved 14th Cav., Fort Riley, and temporary duty with A.C.T. Det., Pine Bluff School of Aviation, Ark.; assigned 4th Armored Div., Pine Camp, N. Y.

Lieutenant Horace S. Levy prior orders amended, from Stockton, Calif., July 26.

Captain James B. Long, from Providence, R. I., to Hq., 6th Corps Area, Chicago, Ill.

Major Dana G. McBride, from Ft. Monmouth, N. J., to off., C.S.O., Washington, D. C.

Major Erle M. McGuffey, Washington, D.C., November 4, to off. J. A. G., Washington, D. C.

Colonel John T. McLane, San Francisco, Calif., October 15, to Hq., 9th Corps Area.

First Lieutenant Donald C. McWilliams, from Ft. Rilev. Kan., to Philippine Dept., sail November 29, San Francisco.

Lieutenant Colonel Harry W. Maas, from Brooklyn, N. Y., to Fort Hamilton, N. Y.

First Lieutenant Aubrey P. Meador, Jr., from Fort Fliss, Tex., November 15, to 5th Armored Div., Fort Knox, Ky.

First Lieutenant John E. Merrill, Jr., from Fort Myer, Va., to faculty, Cav. Sch., Fort Riley, Kan.

Second Lieutenant John Millikin, Jr.'s orders amended to report for duty as student, communications course, Cavalry School, Fort Riley.

Major J. G. Minniece, Jr., relieved detail in Q.M.C. and assignment at Front Royal Q.M. Depot, and additional duty with O.R., 3rd C.A., November 20; assigned 1st Cav. Div., Fort Bliss.

Major James E. Murphy, from Fort Riley, Kan., to Org. Res., 3rd Corps Area, Washington, D. C.

Major J. O'D. Murtaugh, relieved Fort Riley, October 10; assigned Hq., 3rd Air Support Command, Savannah, Ga.

Colonel William Nalle relieved Hq., 4th Armored Div., Pine Camp, N. Y., November 18; assigned as instructor, C. and G. S. Sch., Fort Leavenworth.

First Lieutenant Henry T. Nelson, prior orders amended, July 5.

Second Lieutenant Frank J. Occhipinti, from Fort Lewis, Washington, November 6; to Rock Island Arsenal, Ill.

First Lieutenant Amos M. Osborne, from Fort Riley, Kan., November 2, to Arm. Force Rep. Tr. Cen., Fort Knox, Ky.

Captain Don R. Ostrander, from Ft. Wayne, Ind., to 726th Ord. Co., Selfridge Field, Mich.

Lieutenant Colonel D. S. Perry relieved 6th Cav., Fort Oglethorpe, October 20; assigned Army Group, Washington, D. C.

First Lieutenant Lyle E. Peterson, from Fort Bliss, Tex., November 13, to Fort Sam Houston, Tex.

Captain Henry L. Phillips, from Fort Clark, Tex., to 120th Obs. Sqdn., Ft. Benning, Ga.

Captain Wallace S. Phinney, from Ft. Riley, Kansas, November 1, to off. C. of O., Washington, D. C.

First Lieutenant Ralph B. Praeger, from Philippine Dept., to 2nd Cav. Div., Ft. Riley, Kan.

Captain R. J. Quinn, Jr., relieved 4th Cav. Regt., Fort Meade, S. Dak.; assigned 4th Recon. Troop, Fort Benning.

First Lieutenant Turner R. Ratrie, prior orders amended, from Pine Camp, N. Y.

Second Lieutenant George W. Ridenour, from Fort Riley, Kan., October 20, to Armd. Force Rep. Tr. Cen., Ft. Knox, Ky.

Major Basil L. Riggs, Ft. Myer, Va., to Hq., Fifth Air Support Command, Bowman Field, Ky.

Captain Russell V. Ritchey, prior orders further amended, from Presidio of San Francisco, Calif., to Hq., 4th Interceptor Command, Riverside, Calif.

First Lieutenant Edward E. Rosendahl, from Camp Shelby, Miss., October 25, to Wright Field, Ohio.

Lieutenant Colonel A. H. Seabury, upon his own application, will retire December 31, act of June 13, 1940; relieved Peoria, Ill., that date.

First Lieutenant Alexander P. Sheridan, Washington, D. C., to off. C. of A.C., Washington, D. C.

First Lieutenant D. M. Simpson, detailed in Ord. Dept., September 23; relieved 4th Cav., Fort Meade, S. Dak.; assigned Aberdeen Proving Ground.

Colonel Henry J. M. Smith, from Ft. Clark, Tex., November 5, to Hq., 4th Corps Area, Atlanta, Ga.

First Lieutenant Robert L. Smith, from Ft. Riley, Kan., to faculty, Cav. Sch., that station.

Second Lieutenant James P. Stewart, from Atlanta, Ga., to Army Air Base, New Orleans, La.

Lieutenant Colonel H. P. Stewart relieved 3rd C.A.S.C., Fort George G. Meade, Md., December 1; assigned 3rd Cav., Fort Myer.

Lieutenant Colonel M. L. Stockton, Jr.'s orders amended to relieve him detail in I.G.D.

Captain Emory D. Stoker, from Ft. Riley, Kan., to 6th C. A. S. C., Fort Sheridan, Ill.

Second Lieutenant R. W. Strong, Jr. (now First Lieutenant, Army of the U. S.), transferred to A.C. on October 3.

First Lieutenant Murray F. Sweet, Ft. Riley, Kans., October 10, to Cav. Rep. Tr. Cen., that station.

Major John T. Taylor, from Chicago, Ill., September 22, to Hq., 2nd Army Corps, Wilmington, Del.

Major Frank J. Thompson, from Camp Polk, La., to Hq., Fifth Air Support Command, Bowman Field, Ky.

Major Thos. J. H. Trappnell, from Philippine Dept., to 1st Armd. Div., Ft. Knox, Ky.

Lieutenant Colonel Richard B. Trimble, from Ft. Slocum N. Y., September 30, to home to await retirement.

Lieutenant Colonel L. K. Truscott, Jr., relieved detail as member of G.S.C., assignment to G.S. with troops, and Hq., 9th Army Corps, Fort Lewis; assigned 1st Cav. Div., Fort Bliss.

Colonel Joseph M. Tully, from Fort Riley, Kan., to 4th Cav. Regt., Ft. Meade, S. Dak.

Lieutenant Colonel H. E. Tuttle, relieved present duty at Fort Riley; assigned staff, Cav. School, Fort Riley.

Major C. H. Valentine, relieved Cav. Board, Fort Riley; assigned 2d Cav. Div., that station.

Major L. C. Vance, relieved Philippine Islands; assigned recruiting, Cincinnati.

Lieutenant Colonel T. D. Wadelton, upon his own application, will retire January 31, act of June 13, 1940; relieved Fort Hayes.

Lieutenant Colonel V. W. B. Wales, relieved as instructor, C. and G. S. School, Ft. Leavenworth, December 6; assigned 4th Arm. Div., Pine Camp, N. Y.

Major T. C. Wenzlaff, assigned with Q. M. C., November 20, and Reno Q. M. Depot, Fort Reno, Okla.; relieved Fort Bliss.

Lieutenant Stanley R. Wilbur, from Fort Sheridan, Ill., to Panama Canal Dept.

Lieutenant Colonel G. H. Wilson relieved detail as member of G.S.C., assignment G.S. with troops, and Hq., 3rd Army Corps, Presido of Monterey; assigned 4th Cav., Fort Meade, S. Dak.

Colonel Stephen W. Winfree, prior orders amended, from Atlanta, Ga.

First Lieutenant John S. Wintermute, Jr., from Hawaiian Dept., to 5th Armored Div., Fort Knox, Ky.

First Lieutenant Wiley B. Wisdon, prior orders revoked.

Major W. P. Withers, relieved Fort Knox; assigned office, C. Sig. O., Washington, D. C.

Major J. W. Wofford, relieved detail as member of G. S. C., assignment G. S., with troops, and as military attaché, Dublin, Ireland; assigned Army Group, Washington, D. C.

First Lieutenant Forrest D. Wright, from Camp Bowie, Tex., November 1, to San Francisco Port of Embarkation, Fort Mason, Calif.

Major Wesley W. Yale, from Washington, D. C., December 10, to 1st Cav. Div., Fort Bliss, Tex.

Lieutenant Howard C. Zindel, from Fort Sheridan, Ill., to Panama Canal Dept.

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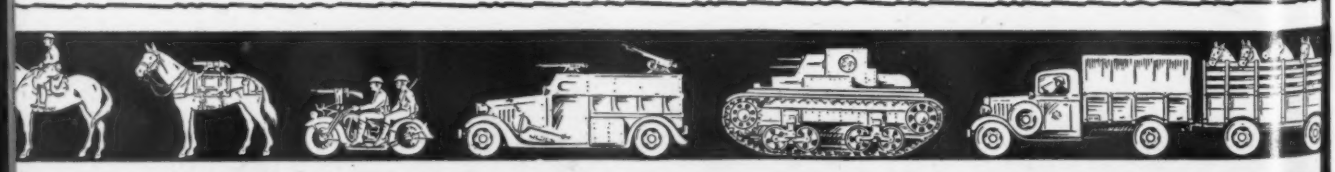
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